Family Health Division
Department of Health Services
Ministry of Health, GoN

PROPOSED REVISIONS TO THE SDIP – STRENGTHENING A MAJOR NATIONAL INITIATIVE FOR SAFE MOTHERHOOD IN NEPAL

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Acronyms

ANC	Ante Natal Care
ANM	Auxiliary Nurse Midwife
BEOC	Basic Essential Obstetric Care Facility
CEOC	Comprehensive Essential Obstetric Care Facility
CREHPA	Centre for Research on Environment Health and Population Activities
CS	Caesarean Section
DDC	District Development Committee
DfID	Department for International Development
DH	District Hospital
D(P)HO	District (Public) Health Office
DHS	Demographic and Health Survey
DoHS	Department of Health Services
EDP	External Development Partner
EOC	Essential Obstetric Care
FCHV	Female Community Health Volunteer
FHD	Family Health Division
FP	Family Planning
GBP	British Pounds
GoN	Government of Nepal
HDI	Human Development Index
HEFU	Health Economics and Financing Unit
HFMC	Health Facility Management Committee
HMIS	Health Management Information System
HP	Health Post
HSRU	Health Sector Reform Unit
ICH	Institute for Child Health
ISO	International Standards Organisation
IMCI	Integrated Management of Childhood Illness
IMMPACT	Initiative for Maternal Mortality Programme Assessment
JCAHO	Joint Commission on Accreditation of Health Care Organisations
MCHW	Maternal and Child Health Worker
M&E	Monitoring and Evaluation
MMR	Maternal Mortality Ratio
MOHP	Ministry of Health and Population
NGO	Non Government Organisation
NHEICC	National Health Education, Information and Communication Centre
NPHFES	Nepal Public Health Facility Efficiency Survey
NRS	Nepali Rupees
PBP	Performance Based Payment
PHCC	Primary Health Care Centres
RTI	Research Triangle Institute
SBA	Skilled Birth Attendant
SDIP	Safe Delivery Incentive Programme
SHP	Sub Health Post
SM	Safe Motherhood
SSMP	Support to the Safe Motherhood Programme
TB	Tuberculosis
VDC	Village Development Committee

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Executive summary

The Safe Delivery Incentive Programme (SDIP), which began in 2005, is a novel and ambitious approach to increase the proportion of supervised deliveries through transport incentives, worker incentives for attending deliveries and facility payments (free deliveries) in the 25 districts with the lowest HDI. Some progress is reported in increasing the percentage of deliveries by a trained health professional, although levels of delivery with health professionals remain low. The GoN is now committed to extend the programme to include free delivery at facilities for all women whilst still retaining the transport incentive. In future the programme will be known as Ama (meaning 'mother').

The aim of this report is to provide a critical reflection on the ways in which the SDIP has been implemented and their implications for the extension to free delivery. The report also takes account of wider policy issues, including free care and future moves to decentralise the government of the country. It was commissioned by DfID, who have committed considerable resources to reducing financial barriers to access to safe delivery care, with a view to provide evidence to inform the development, implementation and monitoring of the free delivery policy and safe delivery incentive scheme. Its intended audience is programme policy makers, managers and funders, including DfID and MoHP

A number of challenges and concerns have arisen during SDIP implementation, which could also impact on the successor free delivery programme unless action is taken. These include:

- Mismanagement of home delivery payments
- Low reimbursement of free delivery component
- Continuing financial barriers for households
- Continued poor access to care of adequate quality, especially in rural areas
- On-going non-financial barriers for households
- Unequal impact by economic status, with the middle groups benefiting most in terms of increased utilisation of services (although gap between middle and poor was relatively small)
- Only modest increases in institutional deliveries to date
- Weak monitoring, accountability and transparency systems
- Concerns about financial sustainability of the system with funding continuing to rely on EDP (DfID) resources

The cash incentive to offset the demand-side costs (e.g. transport and other out-of-pocket expenses) is the most novel part of the SDIP. During the early stages of the SDIP implementation there were some problems in getting cash to women, but after modifying transfer arrangements delays were reduced substantially. Evidence suggests that these payments offset part of the direct costs of delivery at a facility. They remain insufficient to have a substantial impact on the overall cost of care – including demand side costs - particularly in mountain and hill areas.

Incentive payments to health workers have proved problematic. They have created tension between those receiving payments and those that do not and appear also to have led to inefficient staff rotations to give more staff a share of the revenue. Incentives may be difficult to remove unless alternative ways can be provided to give an equivalent incentive to improve working conditions and quality of care. The mis-reporting of home deliveries makes the payment to those undertaking these

deliveries particularly hard to justify and the decision to abolish such incentives appears to be defendable on these grounds.

The proposal to offer free delivery throughout the country has the advantage that it will channel resources to facilities rather than individual staff members. Available information on costing suggests that the tariffs proposed of NRs 700 for a normal delivery, NRS 3,000 for a complication and NRS 7,000 for a caesarean section are in line with the recurrent costs of care. Costing also supports the payment of the higher rate of NRs 1,000 per normal delivery to BEOC facilities. Referral cases are problematic and will need careful monitoring. There is concern that limiting the payment only to the facility of final care could reduce the incentive to refer. Similarly, limiting the payment of transport incentives to the first facility only could deter women from seeking vital care. The prospect of abuse (over-referral or phantom referrals) has to be weighed against the potentially more serious health problem of inadequate referral. Access to *timely* high quality care is critical to saving lives and reducing serious morbidity, and all opportunities to delay the decision to refer need to be removed.

The inclusion of the private sector will challenge the government's capacity to monitor the quality and quantity of services. At the same time, if undertaken gradually it offers an excellent opportunity to improve the monitoring of the private sector and to increase the availability of services. Initial (certification) requirements to qualify to provide services through the programme could be supplemented in a later stage by more advanced accreditation requirements. The MoHP is starting to develop the capacity and willingness to contract with non-state actors to provide services in underserved areas.

Free delivery is developing at the same time as the roll-out of free care to higher level (district and above) services. It is too early to propose integrating these initiatives. More evaluation of the free care initiative is required, including whether sufficient funds have been provided to make it sustainable and fully operational. Free delivery could be undermined by hasty integration. Gradual steps towards integration should be followed, beginning with integration of financial and activity monitoring systems.

Even the best payment schemes have perverse incentives to provide the wrong types of services or misreport activity. Misreporting, identified during SDIP, can be reduced by getting rid of the home delivery payment but this does not in any way reduce the need to improve and properly resource reporting and supervision systems. The misreporting of complication rates is a particular concern with the new system. Payments to facilities, public and private, must be made conditional on compliance with reporting requirements, including the new Ama guidelines and existing HMIS and EOC ones. FHD must receive adequate support to supervise and analyse information at national, regional and district levels.

The overall cost of the Free Delivery programme, including monitoring and evaluation (at constant prices) is expected to increase from NRS 441 in 2009/10 to NRS 748 million in 2017/18. Given the importance of the programme to GoN, it is important that an increasing proportion is financed from the government regular budget. There will likely remain a substantial gap to be filled from other sources, mainly EDPs. GoN and EDPs will need to agree a financing plan to ensure the sustainability of the programme over the next ten years.

The main conclusions and recommendations of this study are as follows:

Cash payments to households

- The cash payments to households should continue in the medium term, and should continue to be tiered by ecological zone. These amounts can stay as at present (50% of average actual costs), but over time, if response is much higher in the tarai, compared to the upland areas, the amounts could be rebalanced to increase the support for the hills and mountains (with a possible reduction in the tarai).

Payments to health staff for facility deliveries

- The decision to build staff payments into facility payments is wise. We recommend that a portion of the facility payment equivalent to the previous NRs 300 paid to staff is set aside for quality improvements. These can include benefits for staff, individually or as a team, but should not be automatic. Some should also be used to make the small changes which can make so much difference to users.

Payments to health staff for home deliveries

- The payments to staff for home deliveries have not furthered the original objectives of the SDIP, and we support their removal. This change must be complemented however by renewed investment in increasing access to facilities (roads, health care infrastructure, staff skills etc.).

National free delivery component

- This new approach should reduce the high facility costs which users face and should therefore improve the progress in increasing facility-based deliveries.
- Current tariffs are broadly in line with the costing estimates and with current user fees
- The costing justifies a higher rate (NRs 1,000) for BEOC/CEOC centres.
- All tariffs should be reviewed in one year, however, to allow for fine-tuning of the rates (and to allow for a broader review of early implementation experiences).
- All payments should be dependent on compliance with quality standards, monitoring and auditing.
- The extent of the free care should be clearly elaborated for women and for facilities (exactly which cost components are included, and for which services, pre-, intra- and post-partum, and for neonatal care). There are currently some small areas of ambiguity.
- There should be close monitoring of the CS rates and of different types of complications, to assess whether there is an undue increase in CS, and/or misreporting of categories of delivery. (This means adding the 10 complication categories to the form in annexe 3 of the current guidelines.)
- Both referring and referral institutions should receive payments, as both will incur treatment costs. Referring facilities should be paid at normal delivery rates and referral ones according to the complication treated. Close monitoring and auditing will be required to ensure that 'phantom referrals' do not occur.
- Similarly, women who are referred should receive two sets of transport payment as they will incur two sets of travel costs. The second payment should be made on arrival at the referral centre.
- The smooth transfer of funds – already an issue under the SDIP – will become of even greater importance with the free delivery component, and with the inclusion of a wider range of providers (see below). Systems for assuring it will be of prime importance for the functioning of the policy.
- Supervision forms should include checks on whether details of the policy and local recipients are being clearly displayed at facilities (this could be added to annexe 6: the supervision

checklist). Other useful additions/alterations to the current reporting forms could include a record of maternity staff (annexe 5: quarterly district report).

- While facilities are free to manage their own funds, it would be useful to have reports of how they have been used. Reporting of use of Ama funds could, for example, follow three simple categories (service costs; staff benefits; quality improvements for users), so that the utilisation of resources can be tracked retrospectively and guidelines adapted in response.
- A new communication strategy will need to be developed as the re-design of the SDIP is quite extensive, and will take time, and some resources, to disseminate. The SDIP should collaborate with the NHEICC on this.
- While the budget for the SDIP/Ama for 2008-9 is fully funded, there will be little surplus left, on current projections of uptake, from existing EDP commitments. It is therefore urgent that financial planning starts soon for FY 2009-10, with support for the new policy sought from a range of potential sources, including the GoN.
- The importance of continuing investment in extending the supply network and improving the availability and quality of care is emphasised here, and the cost implications elaborated.
- The checklist in annexe 2 may be useful for periodic reviews of progress in the development of the Ama programme.

Integration with free basic health care and decentralisation

- The Ama services are already provided in an integrated way, but funding streams are separate. In the short term, this should be preserved, as the wider free care policy is developed and established.
- In the meantime, there should be a focus on supported integrated planning and monitoring of different health programmes by the district team. This is happening in theory at present, but not always in practice. Integrated reporting on monitoring funds should also be a priority.
- At national and facility level, funding for free care will affect the SDIP/Ama and vice versa, so it is important to document their combined impact and the degree of cross-subsidisation from one to another. Maternity care is a core services and has traditionally been an important profit-making activity. The important lessons learned through the SDIP process and internationally on the removal of fees should be absorbed by those responsible for implementing the free care programme.
- In the longer term, and particularly as the GoN assumes a greater proportion of the funding burden for the Ama programme, the funding flows can be integrated at national level. The series of steps for this integration are set out in the report.
- In preparation for whatever form federalism and decentralisation come to take in Nepal, we recommend that the Ama programme supports the piloting of local 'women's health' funds, to be co-managed by HFMC and women's organisations. They could receive a small component (such as NRs 100) from the payment per delivery (thus creating an incentive to boost demand for institutional deliveries). The funds could be used to increase awareness of the new Ama programme, and to tackle locally identified blocks to service uptake (e.g. means of providing warm food at the birthing centre; making centres more comfortable for companion to stay in; assistance where onward referral costs are beyond the family's means etc.). These funds should ideally be matched by VDC contributions, to increase local ownership of the Ama cause. Routine monitoring of VDC contributions would enable programme managers to assess progress. Ultimately, those jointly managed funds could be expanded if wider decentralisation and integration of funding streams occurs.
- Paradoxically, decentralisation usually creates a need to strengthen vertical 'technical' controls at the same time as horizontal links are being pursued. Enforcing financial and

activity reporting to the national level, from districts, will be an important part of that process.

Inclusion of the private sector

- There is now one year's worth of experience of including the PNFP sector and private medical colleges in the SDIP. The patterns of uptake should be analysed for early lessons on the potential contribution of non-state partners.
- The inclusion of the private sector, if carefully, managed, offers opportunities for extending access, improving integration, and raising quality in the longer term.
- We recommend that initially a uniform tariff for public and non-public providers is offered, but with a commitment to review this approach within 2 years and possibly develop a more sophisticated mechanism.
- Facilities should meet HMIS, EOC and Ama reporting guidelines, if they are to receive payments under the scheme. At present, some report, but most do not.
- It should also be clear that no payments can be accepted by participating facilities for delivery care, unless it is part of a separate 'luxury' package, where full costs are paid by clients for care in cabins (private rooms).
- The inclusion should rest on a two-stage accreditation process, in which basic quality standards (as specified in the current guidelines) are the first requirement for entry, but with an agreement that over 1-2 years, there will be a move to more sophisticated service standards.
- TA will be needed over the intervening period to develop this accreditation process, which should form the basis for agreements with public sector providers too.
- In future, there may be opportunity to develop contracts with the private sector to develop new services in under-served areas, with government support for set-up costs. The implications of this go beyond the SDIP/Ama – these are sector-wide and multi-sectoral issues.
- Some of the monitoring and audit roles – particularly for periodic independent checking of functioning - can also be contracted to private organisations and NGOs.
- The same paradox that applied to decentralisation (which needs a stronger centre) applies to developing a stronger public-private partnership: public sector capacity to develop and manage contracts with the private sector must be strengthened for the partnership to work effectively (and this has implications well beyond the safe motherhood sub-sector).

Monitoring, evaluation and further research

- Monitoring will be a key to the success of the Ama programme. It is therefore highly recommended that capacity is developed, at district, regional and national level, to monitor and audit the Ama programme. There are currently a few key individuals who carry out such work very effectively, but this capacity must be broadened and institutionalised, if the programme is to be sustained.
- Monitoring costs should not be under-estimated. Something in the region of 10% of the Ama costs should be added for M&E.
- A range of monitoring and tracking tools should be used, including routine monitoring, spot checks within routine supervision, periodic rapid reviews at community level, annual auditing and more formal evaluation.
- The current forms are well developed. Some minor changes have been suggested, such as tracking the different types of complications; and monitoring (with simple categories) the use of the Ama funds by facilities.

- Evaluation of the cost-effectiveness of the Ama programme will be difficult, primarily because of the difficulty of attributing change in a dynamic situation, with multiple interventions, and no control areas. We therefore recommend a focus on tracking costs and tracking a range of intermediate output indicators, to give a more pragmatic assessment of value for money.
- We suggest that process based rapid reviews are undertaken on a six monthly basis. Available time series HMIS and other data should be collected on a regular basis to permit an interim evaluation after the first 18 months of implementation. We also suggest that a larger scale evaluation that looks at the effect on utilisation and household finances is undertaken after the first 2-3 years of implementation. To ensure adequate baseline data, early preparations for this evaluation should be taken, including quality of care data (which may be available from on-going SSMP studies).
- Case studies on health facility financing (particularly at hospital level) would assist in understanding the likely impact on the hospital economy and would help with planning a more integrated approach to free care generally. At present, for example, there is no systematic reporting of revenues from user fees or local government sources, so predicting the impact of free care policies is difficult. (For example, it is hard to tell whether the free drugs list is having perverse incentives, such as increased prescription of off-list drugs.) This would also provide useful information for future decentralisation discussions, providing information on patterns of revenue and expenditure by facility type and by region.
- Similarly, very little is known on how health worker support themselves in Nepal, and a survey on health workers incentives, and how these link to working practices, would provide useful policy information for planning future initiatives. (For example, it would be good to know whether free care has any impact on dual practice by public health workers.)
- The SDIP has benefited from close collaboration with technical support partners and this collaboration will continue to be important as the programme evolves into this new phase with new challenges.

Introduction

Despite an increase in national rates of coverage from 10% to 20% between 1996 and 2006, the overall proportion of women in Nepal delivering with a skilled health professional has been low. Moreover, the gap between the highest and lowest income quintiles increased by 21% between 1996 and 2006, reflecting continuing socio-economic and geographical barriers. In 2006, the poorest quintile used only 6.4% of total SBA-assisted delivery services, according to Demographic and Health Survey (DHS) data (Health sector reform support programme 2008). Utilisation of facilities for delivery ranged from less than 5% for the lowest quintile to nearly 30% for the highest.

According to the DHS, the maternal mortality ratios (MMR) in Nepal declined from 539 in 1996 to 281 in 2006. This has been attributed to a number of factors, including a fall in fertility, legalisation of abortion (in 2002), increase in family planning (FP) acceptance, increases in ante-natal care (ANC) and immunisation, and a three-fold increase in nurse-assisted deliveries in rural areas (Pant et al. 2008).

The Safe Delivery Incentive Programme (SDIP), which was started in Nepal in 2005, was an ambitious national approach to increasing the proportion of deliveries attended by a skilled birth attendant (SBA). The SDIP to date has combined three key features:

- Demand-side financing (cash transfers to women to cover part of their access costs, varied by geographical terrain)
- Health worker incentives (for facility and home deliveries)
- Fee exemption (in low human development index (HDI) areas)

While all of these elements have been used in other countries individually, the Nepal policy has been unusual in combining all three elements. It is also unusual in that eligibility for cash transfers has been universal (conditional cash transfers are commonly targeted by some criteria of vulnerability).

The SDIP has been well documented, including in a thorough evaluation (Powell-Jackson et al. 2008). The evaluation raised a number of implementation concerns, but found that the SDIP had had a positive impact, with women who had been exposed to the SDIP 24% more likely to deliver in a health facility, 13% more likely to be delivered by an SBA and 5% less likely to have a home delivery.

The Government of Nepal, in partnership with the UK Department for International Development (DfID), and with technical support from SSMP/Options, is to be commended not just for its support for this innovative programme but also for its willingness to adapt and strengthen the SDIP over time in response to emerging issues. Already, within the first three years of its life, a number of important alterations have been made to the policy, including:

- Modification of the SDIP fund flow mechanism from DfID to MoHP
- Removal of the conditionality that a woman must have fewer than two live children to qualify for cash assistance or exempted fees

- Strengthened programme and financial monitoring
- Extension from public to private not-for-profit facilities

In a spirit of continued adaptation and expansion, the GoN is now considering a further set of possible changes. These include (collectively known as the Ama programme):

- The removal of all fees for all types of delivery services, nationwide
- The extension of eligibility to join the scheme to private for profit facilities
- Changes to the existing system of paying incentives to health workers, particularly in relation to home deliveries

The aim of this report is to provide critical reflection on these options, and to advise on the cost implications and sustainability of the SDIP and related policies in future, taking into account wider contextual changes, such as the extension of free care more generally in Nepal and moves towards decentralisation.

The content of the report is derived from key informant interviews conducted in November 2008 (see annexe 1), secondary reports (see references), and wider international experience.

Identifying the challenges

In order to inform future changes, it is necessary to be clear about the challenges which face the SDIP and any successor or linked policies. Notwithstanding the success that the SDIP has had, there are a number of intrinsic and extrinsic factors which continue to raise concerns. These are discussed briefly here.

Misuse of home delivery payments

A recent rapid assessment by CREHPA found that 8% of incentive payments to health workers for institutional deliveries and 71% of payments for home deliveries were fraudulent (CREHPA 2008). The survey was not small-scale and was non-random in its selection of clusters, so these figures have to be treated carefully. However, they clearly indicate some systemic weaknesses and confirm earlier concerns expressed in the evaluation at the rate of increase of reported home deliveries. The majority of false reports were at SHP level. Supervision of these community-based staff (mostly MCHWs), often based in remote locations with poor transport links to higher levels of the health system, clearly poses a major challenge.

Low uptake of free delivery component to date

The SDIP evaluation found that the component with lowest uptake was the offer of free delivery services (fee exemption) in the 25 low-HDI districts. The reasons for this poor uptake are not entirely clear, but should be investigated, as they may have implications for the decision to roll out fee exemption nationally. It is however possible that low uptake was a transitional feature, reflecting the process of roll-out: the evaluation found that 26% of deliveries were reimbursed in surveyed low-HDI districts the first year of operation, but did not collect data for subsequent years. Cash flow difficulties in the first year may be partly

responsible for this disappointing performance. Delays and inadequacies of funding, particularly at the start of the SDIP, are well documented in the process evaluation report (Powell-Jackson et al. 2007).

Continuing financial barriers for households

The cash transfers to households to cover access costs, while innovative and generous, were not able to address all household financial barriers. The SDIP evaluation found that, in one district, the cash incentive represented less than 20% of out-of-pocket expenditure on institutional delivery care. This district was not one of the low-HDI ones, however, so one would expect that the proportion was higher in those exempted areas.

Continued low access to quality care, especially in rural areas

Geographical access to facilities which can offer skilled attendants and other components necessary for safe delivery (including BEOC and CEOC) remains poor. Nepal has 4 national hospitals; four regional hospitals; 8 zonal hospitals; 65 district hospitals (of which only 38 have BEOC and 13 have CEOC); 168 PHCC (of which only 42 offer BEOC); 696 Health Posts (some with birthing centres); and 3,129 SHP. 11 districts have no roads at all. Only 3 districts in the 25 low-HDI areas offered CS care, at the start of the SDIP evaluation (Powell-Jackson, Tiwari, Neupane, Morrison, & Costello 2007).

If access to health care is defined as living within 45 minutes' walk of a health sub-post, only 60% of the country has access, according to the Living Standards Survey (but health sub-posts do not contain staff trained as SBAs, so the situation for delivery care is much worse).

Nepal needs to train 4,088 SBAs by 2012 to achieve its goal of 60% of deliveries attended by SBAs. There were staff shortages in the region of 47% for doctors, 22% for nurses and 9% for ANMs (in 2005/6). Considerable investments are being made in upgrading facilities and training staff, including through the SSMP, but further progress will be needed to complement any policies to address financial barriers.

Non-financial barriers for households

The SDIP evaluation and other reports attest to the importance of other barriers (in addition to cost and distance) which contribute to low supervised delivery rates in Nepal. When asked (in the 2006 DHS) why they had not delivered in a health facility, 73% of women said that they believed it was not necessary. Only 10% cited cost as a factor. It is unrealistic therefore to expect the SDIP to tackle these non-financial barriers directly, without complementary approaches (and over a longer time). However, the design of new implementation modes could to some extent address issues of acceptability and cultural barriers.

Equity issues

The SDIP evaluation finds that the impact of the SDIP on utilisation of SBAs was greatest for the middle quintiles. This may be linked to informal discrimination against paying poorer women, as well as other barriers faced by the poor. Amongst those eligible to receive cash transfers, women with no education, unaware of the SDIP, living more than one hour away

and Dalits were less likely to receive the cash. The universal design also means that women in richer households are receiving an 'unnecessary' subsidy. This 'leakage' will be exacerbated by a universal exemption approach (combined with continued cash payments to women).

Limited increase in facility deliveries

The HMIS points to an increase in facility deliveries during the period of SDIP introduction. This increase has however been relatively limited (reflecting some of the factors mentioned above), with some particular concerns raised about the hill areas, where no significant increase was found in facility deliveries. In addition, some of the increase may reflect women switching from private to public sectors.

The biggest increase has been in home deliveries supervised by a trained health worker. The problem is (a) that these figures are distorted by over-reporting for financial incentive reasons (i.e. reflect an artificial rise for home deliveries which were previously under-reported) and (b) that many of the personnel supervising these deliveries are not fully trained in safe delivery techniques and lack access to life-saving services, if required. This is reflected in the fact that the evaluation found no increase in caesarean section rates. The health benefits of the policy for women are therefore hard to assess. Many of the same staff were previously supervising deliveries in the community, but were not reporting them, as the delivery was a purely private transaction. They may now have been motivated to report the deliveries, but whether there has been a 'real' increase in home-based supervised deliveries is hard to tell from present data.

Motivating and retaining health workers

Motivation and retention of health workers is a global issue, particularly in remote areas with poor infrastructure, such as is found in the upland areas of Nepal. Due to low population density and access problems in such areas, health worker productivity is also typically low. The payment of incentives to health workers was intended to boost productivity. However, as noted, such payments are hard to monitor and are quickly perceived to be part of the expected pay. Any reforms have to balance accountability with ensuring that health workers feel motivated and do not suffer financially from changes to charging regimes.

Weak monitoring and accountability systems

Monitoring financial flows and outputs is a challenge to all health systems. The SDIP process evaluation found that monitoring had been poor and that additional support and resources for effective monitoring were needed (Powell-Jackson, Tiwari, Neupane, Morrison, & Costello 2007). Technical support has since been provided to strengthen management and monitoring of the SDIP. However, future changes will place further demands. In addition to vertical communication and control, stronger local accountability mechanisms will be needed.

Sustainability

The initial financial commitment to the SDIP came from DfID. In the last three years, however, the GoN contribution has been increasing, rising to 40% of the SDIP budget for FY 2008-9. While this is an extremely positive development, the addition of national free delivery care will add considerably to the national programme cost. The GoN needs to plan for how the programme can be sustained in the long term, with support from DfID and other EDPs.

Moving ahead – discussion of SDIP development issues

Cash payments to households

At present, women are given a cash hand-out when they deliver in an eligible facility (from national hospital to health post level, and in a few SHPs with birthing centres). The sum is determined by the ecological zone (NRs 500 for tarai, NRs 1000 for hills and NRs 1,500 for mountains). The money was intended to cover transport and access costs. Evidence from the SDIP evaluation suggests that the funds were commonly used to fund part of the fees and to purchase food. Overall adequacy of funds increased over the three years monitored, with the proportion of women receiving payments increasing from 34% to 59%. Initially, payments were delayed. However, performance improved dramatically over the years, falling from an average of 100 days delay in year 1 to five days in year 3. In part this is due to changes in transfer arrangements and accounting at the national level.

If service fees are effectively removed (see below), that will reduce the justification for cash payments to women, particularly in areas where access costs are lower (i.e. some parts of the tarai). Given the high population based in the tarai (around 50% of the total), the removal of this cash transfer component would generate considerable savings. On the other hand, it would weaken the universal appeal of the policy (though households in the tarai would be more than compensated by the new national fee exemption component – they would lose NRs 500 in cash transfers but gain NRs 700-7,000, depending on the nature of their delivery).

At the same time, the option of increasing cash payments in hill and mountain areas should be considered, as real access costs here are twice the level of current payments: mean estimates for transport costs were more than NRs 3,000 for hill and mountain areas in the 2004 costing study (Borghi et al. 2004). In addition, progress on raising facility deliveries has been slower here, particularly in hill areas (Powell-Jackson, Neupane, Tiwari, Morrison, & Costello 2008), which means that households in these areas will gain less on average from the new free delivery component.

There is no clear justification for a flat rate nationwide, given the lower access costs in lowland areas and the new component of fee exemption.

In the longer term (after 2017), as access to facilities improves and attitudes towards customary site of delivery change, the cash transfers can be reduced or gradually phased out. They can be seen as a transitional arrangement to boost demand for skilled delivery.

Incentive payments to health workers

Health workers are currently paid NRs 300 for carrying out deliveries in participating facilities or for supervising deliveries at home. The latter component was included in recognition of the fact that many women cannot access facilities in Nepal and that encouraging trained staff to attend at home was the least-bad option. (The internationally approved strategy emphasises the need to get women to facilities so that 'at risk' cases can be handled quickly and effectively.)

International evidence suggests that incentives to staff can be effective in promoting preventive services (where demand is low and facilities and staff get little financial benefit from provision, unless incentives are created) (Health Systems 20/20 2007). In Rwanda, performance-based payment (PBP) mechanisms have contributed to increased institutional deliveries. However, PBP approaches are likely to be most effective for services which can be offered opportunistically, such as offering preventive care when mothers and children are attending for other curative services. Delivery care is a service which cannot be offered opportunistically. Women have to present themselves at the right time, and to have quick access when needed, and it seems more likely that action on the demand side (addressing community attitudes, women's empowerment, access, affordability etc.) will be more significant in increasing utilisation, particularly in a country with the terrain and access challenges of Nepal. This may explain why facility deliveries only increased modestly in the first phase of the SDIP, according to the evaluation.

Paying incentives to staff to provide services which are a core part of their job also creates a dangerous precedent for public servants of all types (and can reduce team spirit, if paid only to certain types of staff). This was a view expressed by a number of key informants, who asked the question: 'why do we have to pay health staff an incentive to do their job?' There was also anecdotal evidence of perverse effects, such as rotating staff from other departments onto the maternity ward in hospitals, so that they could receive incentive payments for deliveries. This is likely to damage quality of care.

It is however an approach which will be harder to remove than it is to introduce (the demotivation of reduction or removal is likely to be greater than the motivation related to its introduction). If the decision is taken to remove individual incentives and incorporate them into a facility payment, this will have to be carefully managed, and counterbalanced by alternative rewards (e.g. better housing; food while providing 24 hour cover etc.). There should still be a staff incentive to increase facility deliveries, but these rewards may be earned and enjoyed as a team, rather than necessarily as individuals. These ideas are discussed further in the recommendations section below.

The continuation of the incentive payment to supervise home deliveries is particularly hard to justify. It is possible that this has raised the level of home-based deliveries with a SBA, but, as outlined above, we cannot confirm this based on existing data.

Another possible benefit would have been if the incentive had allowed health workers to reduce the costs of home-based deliveries for households. MCHWs are reported to charge

around NRs 1,000 to clients for a home-based delivery (the costing study conducted in 2003 found a cost of NRs 600 for home deliveries, but this may have increased in the meantime). There is no evidence that this has reduced as a result of the SDIP. Field workers report that financial barriers continue to prevent some women from gaining access even to home-based care.

The problem of getting women to be able to access facilities remains a real challenge however. One approach, which is already underway and is very important, is to invest in the health care infrastructure in underserved areas (staff skills, equipment and supplies, as well, as, much more selectively, buildings). It is important that the budgetary implications of the SDIP do not squeeze this supply-side component, which is widely recognised to be important in the Nepali context.

On the other hand, a large investment in birthing centres and training is hard to warrant in the current climate of low utilisation - around 100 deliveries per year at a PHCC and 27 at a health post according to a recent study (Kolehmainen-Aitken, 2008) - so it is important to improve those aspects of quality which matter most to women. It may be possible to set aside a small portion of the funds received per delivery to invest in a locally managed 'women's health' fund, co-managed perhaps by Health Facility Management Committees and local women's organisations. The funds could address the minor quality issues which most deter users, which will vary by area, and also to promote awareness in the locality. This is discussed further below.

Providing fee exemption nationally

The current proposal is to roll out the fee exemption from the 25 low-HDI districts to the remaining 50 (i.e. to achieve national coverage). Guidelines for the roll-out are in draft stage and are under discussion at national level. The exemption component has a number of potential advantages. By channelling resources to institutions, not staff, it potentially allows for improvements in the supply of care, if prices are set correctly and resources managed well. Some component of individual incentive can be offered out of the payments received. However, these would be established locally, rather than being an automatic and universal entitlement. On the household side, fees at facilities remain a significant financial barrier, which could be alleviated by the removal of facility costs.

The current proposal is to set a fixed tariff of NRs 700 per normal deliveries in non-BEOC facilities, NRs 1,000 for normal deliveries in BEOC facilities, 3,000 for complications and NRs 7,000 for caesarean sections. These are based on available information on the variable costs of providing these services (see costing section below).

As the variable costs include some component of staff time (which is already paid through the government payroll), the tariffs include, in theory, an element of 'surplus' which can be reinvested by the institutions in facilities, staff, supplies or whatever the locally identified priority is. The realisation of this 'surplus' will however depend on a number of factors, including (a) whether tariffs have in fact been set to accurately reflect average variable production costs; (b) the local cost structure (clearly, input costs vary by area and also by

level of the health system – the current tariff is set for facilities of all types); and (c) the efficiency of the institution in combining those inputs to produce services.

Setting the tariff at a level which reflects real service costs is important. International evidence has shown that if facilities are underpaid for delivery exemptions, they will circumvent the policy by a range of strategies such as charging women for a variety of components and/or increasing charges for other services (Witter, Armar-Klemesu, & Dieng 2008).

The suggestion of setting a higher tariff for normal deliveries conducted at CEOC or BEOC facilities (proposed at NRs 1,000 per normal delivery) has pros and cons. In favour of it is the fact that higher level facilities do typically face higher input costs. Set against that is the fact that they may be able to generate more revenue from a higher volume of clients. On balance, and based on costing analyses, it is recommended that a higher rate (NRs 1,000) is paid per normal delivery at BEOC/CEOC facilities, but that all tariffs are subject to review after perhaps 12 months of implementation. All payments should be made dependent on compliance with quality standards, monitoring and auditing

In annexe 2, a checklist is used to assess implementation issues in relation to the Ama programme in Nepal. The checklist was developed based on experiences of delivery exemption schemes implemented in other countries (Witter, Richard, & De Brouwere 2008). Overall, the SDIP/ SDIP+ scores fairly highly, with most of the issues appropriately addressed. However, there are a number of points arising from the checklist which require further attention or thought.

One is the *clarity of the package*. While the current policy focuses on intrapartum care, this leaves open the question of cover for postpartum care, and complications arising early in a pregnancy. (ANC is already provided free of charge and has reached high levels of coverage.) It may be necessary to specify which pregnancy-related services *can* be charged for. For example, hospitals may currently derive significant income from carrying out ultrasounds or pathology work. Is this part of the new package, or an optional component of antenatal care which families should pay for? The extent of the free care should be clearly elaborated for women and for facilities, and also specify which aspects of care of the new born are included (for example, all routine care may be provided up to the fifth day post-delivery, or routine care may be provided but not emergency care, which may be covered by the wider free care initiative).

Ambiguity on cost components to be covered or type of care can lead to opportunistic charging by facilities (Witter 2009). If, for example, the payments to facilities cover all care up to the point of discharge, then a second payment may be needed if women return to facilities with later complications related to the delivery. This situation can however be manipulated for provider profit, and so close monitoring of trends will be needed. It should also be specified whether women are eligible for a second travel payment, in the event of post-discharge complication.

The checklist also raises the question of whether the *contribution of community staff* is effectively deployed within the policy. At present, some facilities report paying a small amount to community health volunteers who encourage or support women to come to facilities for their delivery. This is not reflected in official policy but represents a useful local innovation. A note on this could be included in the new guidelines, or it could be left to the HFMC to decide on, using the small surplus which it is anticipated the payment per delivery will bring.

On the question of the *referral system*, there is no system at present for discouraging women from presenting themselves for normal deliveries at higher level facilities – up till now, the cost of delivery itself was a deterrent. Transport payments are fixed, so that too should deter women from travelling an unnecessary distance. Physical access is also challenging in many areas. This is therefore unlikely to be a major issue. However, the new free delivery component means that women may prefer higher level providers – this is something which should be monitored in future (relative workload increases at different levels of the health system)

The *payments for referral cases* should be clarified in future – whether referring and referral facilities both receive payments for the same delivery; whether and how women receive transport cost support for the onward journey; and how these costs are recorded and monitored. Our recommendation is that both referring and referral centres should receive payments (at normal and complicated rates, respectively). This reflects the fact that they are likely to both incur substantial costs for complicated cases. In addition, the intention is to deter lower level facilities from retaining women who require more specialised care. There is a risk of mis-reporting, which is recognised. Once again, close monitoring will be the key to identifying facilities which are abusing this system. Referred cases must be recorded as such in the routine forms, and trends should be intelligently analysed. In addition, the payment of a second transport fund to the woman should be made on arrival at the higher level facility, to ensure that the journey is in fact made.

Costing work has been undertaken at various stages of the SDIP and is ongoing for the new developments – the policy in Nepal compares favourably in that respect with equivalents elsewhere, where the resource implications do not appear to have been clearly understood at the time of the policy's introduction. However, matching the projected costs with funding sources is a current priority (discussed below).

In relation to the *clarity of the message* about the SDIP, the evaluation found some initial confusion at community and facility level about the SDIP (which was quite a complex policy to grasp). This has improved over time, as evidenced by improved SDIP funding flows etc. However, the current re-design will create a need for a new communication campaign.

On *monitoring,* the SDIP evaluation suggests that this was not initially well developed. The new Ama programme should learn from that experience. Monitoring funds have been sent to the districts but the consultants understand that these funds have not been fully used. This issue should be investigated. Monitoring at district level will be key to ensuring that the

new policy is successfully implemented. Given that travel time to facilities is large, from the district centre, an integrated approach amongst the health team makes sense, and is supposed to be happening. There should be support for all supervisors in filling in the Ama forms, as well as those for other health programmes. The DHO should also report in an integrated way on monitoring funds, so that resources from different donors and programmes are recorded, and the integrated expenditure on monitoring and supervision related to an integrated revenue stream.

In relation to *displaying eligibility and benefits* at facilities, this was meant to happen with the SDIP in theory, but in practice has not been fully observed. This should be integrated into the Ama supervision checklist, which is under development within the current guidelines.

On the *regularity of funding flows*, lengthy delays were documented in the early stage of SDIP implementation, but this has improved dramatically. The introduction of free delivery care will increase the importance of this issue, as the implications for service delivery of irregular funds will be much more severe. It is therefore important that clear systems for transfer and accounting are agreed in advance which allow for continuous funds flows, except in the event of a major concern over accountability.

On *payment systems*, the current suggestion is that the public sector will be paid in advance (with accounting for funds retrospectively), while the private sector will be funded retrospectively for services delivered. This can work if the flow of funds is fast and efficient. The extension of bank accounts for public facilities, which is ongoing, should make the process easier to manage.

Detailed *monitoring forms* have been developed, and there is a provision for regular spot checks of women who are reported to have received free deliveries. The good use of these monitoring tools will be of paramount importance.

To date, there is no evidence of an increase in *CS rates*. However, the previous policy incentives were either neutral or negative (the same rate was paid for all deliveries, whether complicated or not, in the low-HDI districts). In future, there may be some benefits to facilities from increasing CS numbers. This should therefore be monitored, and tariffs adjusted accordingly.

The *financial impact on health facilities* should be monitored, with checks to ensure that costs are not being shifted onto other services, or into informal payments. This has not been considered to date and was less applicable under the SDIP. In future, some case studies of hospital financing (taking the hospital as a whole), and how it changes over time with the introduction of the free care policies, would give useful insights. These should look at the total revenues and expenditures, including user fees, local government contributions, and funds from sales of drugs through CDPs or external pharmacies which provide rent to the facility.

It will also be important to consider the *impact of the new policy on individual health workers*. In some contexts, where health workers are dependent for part of their income on user fees, fee exemption can cause a motivation crisis and lead to perverse effects (Witter, Kusi, & Aikins 2007). In Nepal, most staff have not been paid from user fees, at least at lower level facilities. However, there are high levels of dual practice amongst public health workers. The free care may threaten that. The problem is likely to be greater in urban than rural areas. Auditing should aim to assess whether staff are implementing the policy effectively. The routine spot checks on beneficiary women will provide some information on this, but can be augmented by the periodic rapid assessments, or additional studies such as a health worker incentives survey[1].

There were no *baseline data* at the start of the SDIP, but the evaluation data can provide some of the baseline data for the Ama programme. Some aspects, such as quality of care indicators, require additional measurement, however (though ongoing SSMP activities may be drawn on to provide this).

Inclusion of the private sector

The private sector represents a significant part of health sector funding and delivery in Nepal. Private sector funding represents just under 63 percent of total funding of the sector (Prasai, Karki, Sharma, Ganwali, Subedi, & Singh, 2006). Whilst much (78%) of private spending is on drugs purchased at drug stores, significant sums are also spent in private hospitals, nursing homes and clinics (between 11 to 15% in the period 2001/02 to 2002/03). It is estimated that whilst there were 6,710 available beds in public sector facilities in 2006/07 that there at least 9,000 beds[2] in the private sector (DOHS, 2008). According to a study conducted in 2003, the little evidence available suggests that the PFP sector accounts for up to 12% of delivery care, and 20% of EOC (predominantly amongst the better off sector of society) (MacDonagh, 2003). One quarter of facility deliveries took place in private sector in 2006 – double that of 1996 (Pant, Suvedi, Pradhan, Hulton, Matthews, & Maskey 2008).

A simple dichotomy between private-for-profit and not-for-profit, whilst convenient, is not necessarily always helpful. The private or non-government sector is diverse ranging from large for-profit private medical colleges and hospitals through mission and NGO facilities to small rural hospitals and private clinics staffed largely by public professionals during time when they are not working in public facilities (dual practice). Some apparently commercial facilities appear to operate on a not-for-profit or at least minimal profit basis with substantial services provided at below cost to clients. At the same time not-for-profit providers may still offer substantial salaries to workers derived from payments made by clients.

[1] Such a survey, looking at health worker working hours, client numbers, pay from different sources, and motivation, was planned as part of the SDIP evaluation. It was not carried out in the end, presumably because of time and resource constraints, but remains a useful tool for understanding the health worker economy .

[2] Note on Public-Private Partnerships in NHSP July 2008.

There is growing interest to utilise the capacity of non-government organisations to deliver on NHSP goals. Approaches to ways of working differ across the sector. One approach is to view their role mainly as providers of services in areas where the public sector is inadequate. Public policy is then aimed at contracting with the sector and regulating behaviour. A wider approach is to view non-government sector as partners not only in the provision of services but also as financing agents (risk pooling) and the development of sector policy and strategy. However, this is a broad issue that requires handling at a higher level than the relatively small safe motherhood programme or SDIP sub-programme.

The revised SDIP does envisage a growing role for the private sector. In fact the current SDIP already incorporates some non-government providers. NGO facilities and private medical colleges already participate in the travel incentives for women. Much of the revenue for these colleges is derived from student fees and the incentives programme is one way of stimulating the flow of women requiring delivery that is essential to their teaching programme. The revised SDIP envisages an expanded role with all private facilities being potentially able to participate both in the incentives and free delivery part of the programme.

Private facilities are likely to be interested to join for a number of reasons. First, in many cases they face low utilisation at present, so there would be little additional cost to filling their capacity. Secondly, where the SDIP is implemented in surrounding public facilities, they will face falling demand. Thirdly, even where the SDIP+ is offering a rate below their current charges (which is not always the case), it could function as a loss leader for them in marketing other services.

From the public perspective, there appear to be two core reasons for incorporating private providers in the SDIP. The first is to promote access to services. It is clear that there is insufficient capacity within the public sector to provide skilled attendance to all pregnant women - a key reason why the programme also included an incentive to health workers for attending delivery at home. In principle the capacity of the private sector could add substantially to the overall ability to provide skilled delivery care. The concentration of private facilities in larger urban areas means that in practice the sector may not enhance access substantially.

A second reason is that greater choice of facilities could act to stimulate competition in a way that increases the quality of services. This advantage is highly dependent on whether the agency distributing funds - in this case FHD, DoHS, through D(P)HOs, is able to monitor the quantity and quality of services. If monitoring is not adequate, then rather than competing for better quality, incorporation of providers that are not historically used to reporting to the public sector could reduce quality of service. In addition loose contracting and monitoring could raise the potential for abuse in the form of mis-reporting of deliveries to capture more funding.

There does indeed appear to be limited evidence internationally that contracting can improve quality (Palmer & Mills, 2006). The evidence also suggests that gains are heavily

dependent on strong monitoring operating on a small scale: the advantages quickly dissipate when programmes are scaled up and made dependent on existing public sector capacity to monitor and regulate services.

If care is taken to establish adequate monitoring systems, the contracting of private sector providers represents a good opportunity to encourage the improvement of standards in the sector and obtain information for monitoring. In Nepal, as in many low and middle income countries, it is extremely difficult to maintain standards even within the public sector. Private providers are also often reluctant to report on their activities. This is illustrated by the lack of information on private providers in the HMIS: the 2006/07 Annual Report suggests that only a small proportion of private institutions regularly reports on their activities (DOHS, 2008). Monitoring and regulating private providers is usually based on minimal licensing, which at best may only ensure basic adequacy of the facility at time of registration and at worst can simply work as a way of encouraging rent-seeking behaviour amongst bureaucrats (Hongoro & Kumaranayake, 2000; Kumaranayake, 1997).

Increasingly countries are beginning to turn to systems of opt-in voluntary accreditation as a way of focusing regulatory activity and resources to improve performance. The aim of most accreditation is to encourage providers to voluntarily comply with higher, process and output-led standards on a regular basis. The incentive for providers is generally to use the accreditation to encourage individuals to use their facilities or as a way to win scarce contracts with public sector purchasers. Private providers in both Thailand and India have utilised both ISO system standards and international versions of the US JCAHO (Joint Commission on Accreditation of Health Care Organisations) process and output standards to create market advantage over competitors in order to attract demand (Ensor & Weinzierl, 2007). Some systems have gone further to replace defective licensing as well as and encouraging general improvements in quality. In Brazil, for example, the Organizacao Nacional de Acreditacao (ONA) offers a two part accreditation to facilities (La Forgia & Couttolenc, 2008). The first stage requires a facility to fulfil basic criteria for licensing such as health and safety and minimum staffing for services offered. Facilities then achieve higher accreditation over time by improving their process of care, based on an agreed development plan.

The current revised guidelines for SDIP permit the incorporation of private facilities into the scheme provided that they conform to criteria on specifications for providing BEOC care, including legal registration with public authorities, readiness to provide 24 hour delivery care, adequate equipment, minimum of 15 beds, adequate water, electricity, supplies and ambulances, and procedures for disposal of waste.

In addition they will be required to report on their activities in line with HMIS and EOC requirements. Although these facilities will be paid on the basis of normal, complicated (1 category of payment) and caesarean section, they should be required to report in detail on the types of complications and other indicators required by the EOC monitoring framework through the HMIS. This will permit later audit on the incidence of complications,

comparisons between facilities and provider types and later supervision and follow-up monitoring.

These minimal criteria (certification) could be supplemented by a requirement that facilities enrolled into the programme demonstrate quality improvement in the processes of care and preparedness to provide basic and comprehensive EOC. The contents and means of monitoring this second level certification (or accreditation) will require considerable input to work out suitable standards. Such standards should apply equally to public and non-providers. Conceivably it might form the basis of more general accreditation of facilities for other health services. At this stage it is important that the guidelines reflect an intention to introduce such a programme.

Two further issues related to private sector contracting merit comment. The first is that the cost and financing structures of non-government providers differ substantially from public sector providers. In particular, many private for profit providers may have to cover their full costs of service in the absence of other forms of funding available to public providers, through regular line item budgeting, and some NGO providers in the form of subsidies from international or local organisations. This is likely to make the payments available through the scheme unattractive to many. At some stage if the scheme is serious about the inclusion of non-government providers, a more complex payment and contracting system may be required that differentiates the payments offered to different types of organisation.

It is probably premature to introduce a multi-tariff system at the moment for two reasons. The first is that it would be wise for regulatory reasons to encourage gradual private participation, rather than pretend that it is possible to safely contract with many providers immediately. Starting initially with providers that require lower payments to survive either because they have lower costs or because they have other forms of revenue (e.g. medical colleges and many NGO providers) will help to make the task more manageable. The second reason is that there is simply not enough information on costs of these services to permit an accurate development of reasonable tariffs for different providers. More work in this area will be required which is likely to go beyond the contracting of safe motherhood and extend to other forms of health service contracting.

A second issue is whether private providers should continue to be permitted to take paying delivery cases, in addition to those they provide free of charge under the delivery scheme. The current revised guidelines prohibit taking payments for delivery care for patients in facilities enrolled in the free delivery scheme on public wards. They are still able to take payments for those choosing to pay for a private cabin. There is a concern that this could deter private providers from enrolling into the free delivery scheme. This is a legitimate concern, overlapping with the need, discussed earlier, to recoup the full cost of services. Against this must be set the countervailing concern that if hospitals are permitted to charge for some deliveries then they may essentially use free care to fill unused capacity, whilst attempting to extract payments from women where possible. In more popular facilities paying deliveries could be preferred to non-paying. This could well undermine the principles of the free delivery scheme and send out mixed and confused to the population (that will

already be confused by the plethora of policy statements on SDIP, free delivery and free care issues in recent months).

In addition to the inclusion of existing non-government providers into the free delivery scheme a more active role might be developed by requesting bids to provide services in areas that are not currently well served by public or private health facilities. Such contracts are more complex since they would need to incorporate the capital costs of developing services as well as reimbursing recurrent expenditures. In addition, given the risk of developing services, they are likely to need to guarantee to pay for a volume of service over an extended period. The capital dimension to reimbursement may make it initially difficult for GoN to undertake such contracting but this could be an area where a development partner is invited to provide direct funding and initial responsibility for contracting. Although still not common, such contracting is beginning to be used to help extend access to basic services in other countries. In parts of India, for example, partnerships of this type are being used to increase access to primary care in under-served areas (Ghanashyam, 2008; RTI International, 2008).

Such partnerships are uncommon in Nepal. Attempts at involving the private sector in management of tuberculosis have been made with mixed results (Hurtig, Pande, Baral, Newell, Porter, & Bam, 2002). Whilst a number of non-government providers joined a scheme to involve them in the implementation of the national TB programme public sector agencies, in particular the National TB Centre found that it lacked resources to engage fully in supporting non-government providers to deliver good quality services and monitor their quality. Private providers tended to be happy to deliver curative services but were less enthusiastic about conforming to a uniform reporting system (which is crucial in monitoring the overall implementation of the programme). If the non-government sector is to be encouraged to provide delivery services in remote areas, it will be important to learn from this experience and ensure that there is capacity, either within the public sector or through a contracted management agency, to contract and monitor services (including preventive and promotional services).

Involvement of the non-government sector in the free delivery scheme could yield gains in extending access to services. But these gains are only likely to be realised if adequate thought and resources are given both to the regulation and accreditation mechanisms and contract and monitoring. The novel nature of such partnerships in Nepal suggests the need for a gradual approach to the incorporation of the non-government sector alongside substantive investment in these mechanisms.

Integration with the wider free care policy

User fees started in the 1970s in Nepal, in response largely to drug shortages. The second long term health plan (2001-2017) envisaged the spread of cost recovery via user fees, aiming for full cost recovery with health insurance by 2017 (HSRSP 2008). However, thinking on this issue has changed and ‘Health for all’ is now enshrined in the interim constitution as a fundamental human right.

Over the past 18 months, a series of reforms have been brought in which have extended the right to receive health care without payment for fees or drugs, first to targeted 'vulnerable' groups, then to all patients at sub-district level, and now, in this financial year, it is hoped, to all health care up to the district hospital level. There are also further plans under discussion to extend free care for selected groups (such as the poor, and elderly) at the national level. This rolling approach to removing user fees has resulted in some confusion about the current situation, with different key informants providing different information on which elements are now provided free of charge.

Under the previous system, facilities charged a small fee (NRs 5-10) for registration, and patients also paid for drugs which were out of stock (which was common), either in regular pharmacies or community-run pharmacies. The HFMCs were able to set fee levels and to use the funds for minor expenses. Some areas also had community health insurance. According to the health facility efficiency survey of 2004, user fees contributed more than 50% of total revenues at regional hospital level, but at DH and HP level only 8% and even less below (5% at PHCC; 3% at SHP). In that context, it should be relatively easy to remove fees for lower level facilities (though this does not necessarily tackle the issue of catastrophic costs for more complex procedures).

The policy of free care is currently operationalised by boosting funding for essential drugs and providing small payments to health facilities per outpatient visit. Facilities are no longer permitted to charge for registration or for 32 essential drugs (at HP level) or 22 essential drugs (at SHP level). Sub-district facilities receive NRs 5 and DHs receive NRs 25 per outpatient. The size of payments for inpatients is currently unclear.

This has been added to the programmes which were already free (FP, immunisation, ANC, TB, malaria, kala-azar, leprosy, snakebites, IMCI, STDs, HIV/AIDS prevention and treatment).

RTI has estimated the costs of free health care at district level and below at USD 15-21 million USD per annum, depending on the demand scenarios.

There is as yet no formal assessment of the impact of the policy, which has in any case been evolving over time. However, early evidence suggests that outpatient visits have doubled at HP and SHP levels in the first 6 months of 2008, compared to the year before (RTI 2008). A non-representative survey found no evidence of increase in utilisation by the poor or ultra poor but the user classification by health workers was recognised not to be reliable. Inpatient visits at PHCCs showed an even bigger increase (six to ten-fold). Most (91%) of facilities had received directives on the operationalisation of policy and 76% of facilities reported at least one set of reimbursements (most had received three). One third reported drug stock outs at least once during the period (but there was no evidence of how that compared with the period before free care). Most reported one stock out, and of just a few drugs.

It is not within the scope of this study to assess the design and effectiveness of the free care policy. However, it is clearly a significant national initiative, which will face many of the same

issues as the SDIP/SDIP+. It is therefore important that lessons are shared between the two initiatives and that, in the medium term, there is integration between them (and with the many public health programmes which are also free and managed in a vertical way). At the facility level, service delivery is conducted in an integrated way, and monitoring by the district should increasingly be conducted in an integrated way too (see above). Financial management of resources at facility level is also integrated (funds generated by the Ama programme, for example, feed into the facility budget as a whole – there is no restriction on how they are used). The final step will be integration of funding flows at and from the national level.

There is some evidence that integration of funding streams (e.g. through a SWAP) has led in other countries to a fall in spending on maternal health (Ensor et al. 2002). This is a particular risk if the costs of the wider free care policy are hard to sustain. The existence of the cash payment to families component is another anomaly, which supports the need for separate funding. In the medium term, it is therefore desirable that funding flows for the Ama programme (including technical support and overhead costs for monitoring etc.) are earmarked, whatever the channel of disbursement.

The maternity services are a core component of care, and upgrading of facilities and training has a knock-on effect for other care provided, just as maternity revenues are a core component of health financing at facility level.

Over time, the following gradual, well-planned steps towards integration are advisable:

- The funding for Ama is integrated into the national budget and financial management systems (while still ear-marked)
- A free care package is developed which plans for all services, including maternity
- Sector and sub-sector TA is integrated so that support is given to extending access to quality care for all essential health care services, including deliveries.
- 'Free care' is built into general financing for health facilities, with continued strong reporting and monitoring, however, to ensure that quality and quantity does not drop. This will be facilitated if access improves to the extent that the cash payments for transport are no longer necessary, particularly in tarai areas.

Decentralisation

Decentralisation has been on the agenda for a long time in Nepal, but its implementation has been hampered by conflict and political uncertainty. At the present time, a new constitution is being debated, with a planned but as yet uncertain federal structure. Discussion of the impact of decentralisation on the SDIP/Ama is limited by the uncertainty about how political decentralisation will progress.

In general, the rationale for decentralisation in the health sector is to improve the responsiveness of services to local needs and/or to improve efficiency through better allocation and use of resources. Some studies report success in this domain. However, others report on a range of problems linked to decentralisation, including a de-prioritisation of health, a tendency to focus more on curative care (within health spending) and disruption

to previously successful vertically managed programmes. This is a particular worry for the SDIP, which has been working hard at strengthening its systems and controls.

The literature on decentralisation distinguishes between 'decongestion/deconcentration' (passing of decision-making power to lower levels of the health system), 'devolution' (passing of decision-making power to local government bodies, and 'delegation' (passing of power to semi-autonomous bodies (Mills & et al. 1990). Of these three, the first option tends to offer most control by national ministries, as decision-making is passed to staff within their supervision structure. Devolution, by contrast, passes resources to non-health sector staff and allows for the transfer of resources between different sectors.

The effects of decentralisation in various forms are influenced by the extent to which decision-making 'space' is offered over important areas, such as budgets, staffing and/or service provisions. The capacity of local actors and the nature of local accountability structures are also very significant in determining the impact of decentralisation (Bossert 2008). Transfer of powers can be abrupt or gradual, and can be differentiated by function, with wide 'space' in relation to certain aspects, and very little 'space' in relation to others. Evaluations of decentralisation are hampered by the fact that it is usually undertaken alongside other component of health sector reform (Ensor & Ronoh 2005).

The high national importance of the SDIP/Ama and the large volume of funds being channelled through it, combined with the need for accountability to donors for the resources, suggest that, in any moves towards integration of funding flows (with other budget lines, e.g. for free care) and towards decentralisation, the resources for programme should be earmarked, at least in the medium term. In Ghana, earmarking funds for reproductive health helped to preserve activities despite delays and rigidities in general government funds (Mayhew 2003). Whether this earmarking is applied to a 'vertical' funding channel from the MoHP, or to a 'horizontal' fund managed at local levels, is not of prime importance, as long as the funds are ring-fenced and cannot be used for other purposes. Other supporting arguments for continuing earmarking of fund include:

- The desirability of having a uniform package available nationally (there are practical, political and equity reasons why this is desirable)
- The development of new modalities of inclusion for the private sector will also require careful development, and there is a risk of local 'capture'
- The fact that decentralisation will require considerable investment in building local capacity to manage resources effectively and to strengthen local governance mechanisms, and this process will take time

Paradoxically, decentralisation usually creates a need to strengthen vertical 'technical' controls at the same time as horizontal links are being pursued. Enforcing financial and activity reporting to the national level, from districts, will be an important part of that process. At the national level, it is also important for the MoHP to develop new skills to play its role as steward and regulator of health markets.

Monitoring

The new SDIP guidelines aim to stop the home delivery incentive for both reporting and also SM reasons. It is important to stress, however, that stopping home delivery incentives does not eliminate the issue of reporting. The CREHPA study also identifies mis-reporting of institutional deliveries although the numbers are quite small (8%) and are well within expected thresholds for mis-targeting of scheme effectiveness. It is also possible that stopping the home delivery incentive could shift rather than remove the issue of mis-reporting at peripheral level. The same health workers that mis-report home deliveries will still be working in health posts and sub-health posts. The relatively light peer-monitoring at this level and the desire to extend the scheme to lower level facilities reinforces the need to ensure that supervisional audit of reports at this level is still possible. In some cases monitoring may be relatively simple – examples are given where more deliveries are reported for the incentive scheme than the birth rate and population of the area suggests. In other cases mis-reporting will be more subtle. Extension to the private sector raises a further challenge in this area.

Health financing schemes such as SDIP have considerable potential to influence the behaviour of providers and patients. Whilst the intention is to use incentives to increase the take up of effective services, it is inevitable that some incentives to encourage inappropriate services will also coexist. In the case of the SDIP and free delivery care, such potential behaviour includes:

- misreporting by facilities of number of deliveries to increase payments
- categorising deliveries as complicated to receive higher payment
- over-provision of caesarean sections
- over provision of 'minor' complications, which generate higher revenue than their costs
- referring more expensive complications to other facilities to avoid incurring costs that exceed payment
- referring excessive numbers of women, without treatment, to gain first-level payments without incurring any costs

Whilst the design of a scheme can reduce these behaviours it is almost impossible to eliminate them altogether. Also reducing one type of perverse incentive can lead to others. The maternity voucher scheme in Gujarat, for example, differs from the Nepalese scheme in reimbursing providers a flat payment regardless of type of delivery (Bhat, Singh, Maheshwari, & Saha, 2006). This ensures there is no incentive to undertake unnecessary caesarean sections. But at the same time there is an incentive to skimp on services offered to women and also to persuade more expensive (complicated) cases to seek care elsewhere.

Given that avoiding all possible perverse incentives is not possible, monitoring the prevalence of the most important likely issues becomes extremely important. It is strongly suggested that the routine forms include a classification by type of delivery complication (as opposed to the current three-fold classification relating to the tariff, which is divided into normal, complicated or caesarean). If all participating facilities were capturing and reporting

complications by cause, it would be possible to review and therefore investigate any anomalies that arise in terms of profile of complications and as a percentage of all deliveries classified as complicated. With EOC data from 13 districts over 10 years we have a good basis from which to compare the profile of complications (which has changed little over this period).

Monitoring will take many forms. These should include:

1. regular reporting and supervision
2. audit of patterns of delivery and payments (intelligent analysis at district, regional and national level)
3. rapid assessment, to be carried out 1-2 times per year
4. periodic evaluation of impact (every few years)
5. accreditation can also be used as a monitoring tool (see above)

Payments to facilities should be made conditional on compliance with reporting requirements. In addition, the role of the regional monitors should be strengthened. Local accountability could also be developed in pilot areas through closer involvement of women's groups in overseeing the Ama programme and in managing the 'quality improvement' portion of the funds (for example, 300 NRs per delivery). This could be used to address the minor practical issues which improve the service for users (e.g. somewhere comfortable for their carer to sleep), as well as rewarding staff who work hard (for example, providing food for staff who work over-time or at night). Ideally, these funds should be matched by VDC contributions, to increase local ownership, and these contributions should be monitored to indicate the local commitment to the programme. Other sectors can also be involved – for example, the local primary school teacher might play a useful role on the Ama committee and also in publicising the Ama programme in the community.

Given the importance of effective monitoring, it is important that adequate provision is made for the costs of monitoring and evaluation and these are incorporated into the budget for free delivery. We recommend that provision for at least NRS 34 million per year is made for these activities (Table 1). This includes national level supervisors, but not the additional international supervision and TA that is provided through SSMP.

Table 1: Monitoring and evaluation of SDIP+, including free delivery (draft budget in NRs & USD)

				Start up			Annually		
		Unit Cost	Type	Units	Total	Total (USD)	Units	Total	Total (USD)
1	**Supervision & Monitoring**								
	District Supervision								
	District supervisors	[District level budget]							
	District supervision visits	200,000	Annual budget		-	-	75	15,000,000	208,333
	Regional supervision				-	-		-	
	Regional evaluators	780,000	Annual salary		-	-	5	3,900,000	54,167
	Regional supervision visits	250,000	Annual budget		-	-	5	1,250,000	17,361
	National Supervision				-	-		-	-
	National advisors	1,360,119	2 annual salaries		-	-	2	2,720,237	37,781
	Supervision travel	270,000	Annual budget		-	-	1	270,000	3,750
	Financial management softwa	100,000	Annual maintenance/update		-	-	1	100,000	1,389
2	**Rapid Assessments**	1,500,000	Per assessment		-	-	2	3,000,000	41,667
					-	-		-	-
3	**Impact evaluation**	10,000,000	Per evaluation		-	-	0.5	5,000,000	69,444
					-	-		-	-
4	**Facility accreditation**				-	-		-	-
	Development & modification o	6,840,000	Start up developemnt	1	6,840,000	95,000		-	-
	Monitoring of facilities	50,000	per facility visit		-	-	30	1,500,000	20,833
	Modification of standards	1,000,000	Ongoing modification		-	-	1	1,000,000	13,889
					-	-		-	-
	Total				6,840,000	95,000		33,740,237	468,614

Costing of the SDIP

In this section of the report, we examine the unit and total costs of the proposed free delivery care scheme. This section has two main intentions. The first is to examine the costs of delivery care compared to the available resources and suggest whether the tariffs proposed in the new SDIP guidelines are sufficient. The second intention is to examine the overall funding requirements for free delivery care.

Unit costs

There is no recent survey of the unit costs of health services that focus specifically on delivery or general medical services. Recent costing, such as those undertaken by RTI, made use of earlier studies undertaken in 2003 to 2004 (Borghi, Ensor, Neupane, & Tiwari, 2004; Nepal Health Economics Association, 2004). We understand that RTI will undertake a new costing study in the near future which will provide a much needed update to these figures. In the absence of more recent information, we also utilise these earlier studies to derive unit costs. In addition, normative capital costs are obtained from the costing of standard equipment packages undertaken by SSMP. Costs are divided into four components:

1. General facility costs, reflecting the cost of personnel and running costs of each facility. These costs are derived from the Nepal Public Health Facility Efficiency Survey (NPHFES) and updated for changes in prices.

2. Supplies cost (medicines, gloves, syringes etc) based on the normative costing undertaken in the Borghi et al study and cross-checked against current experience in facilities.

3. An allowance for minor quality improvements. Under the original SDIP this was given directly to individual as payment for the delivery. We suggest that in the new

guidelines it is used to make small quality improvements, including general incentives for staff.

4. Capital cost of equipment. This is the delivery-specific costs of equipment required to provide an appropriate level of care. Costs are based on an annualisation of the basic equipment packages, apportioned to delivery care and divided by the expected number of deliveries.

(Details of the assumptions made for the costing are provided in Annexe 3.)

For funding flows, there are two principal sources:

1. Regular budget allocated through District Health Offices (DHOs), primarily to finance personnel costs but also providing resources for overall running costs and medical supplies. The new free care policy is providing additional resources for facilities although it should be noted that this is largely not for delivery care, where the consumable costs continue at present to be mostly financed by charges.

2. The proposed subsidies of NRs 700 for a normal delivery, NRs 3,000 for a complication and NRs 7,000 for a caesarean section.

In addition, facilities receive resources for recurrent costs from Ministry of Local Development committees (VDCs or DDCs) and external development partners. Since these sources vary substantially from facility to facility these flows are not included in the analysis. Funding for capital improvements are provided separately by the DHO.

Calculations in Table 2 suggest that the recurrent costs of a normal delivery at PHCC is NRs 1,094 and at health posts NRs 1,101 RS[3]. These costs are just offset by the resource flows, leaving a small surplus. A recent survey found that PHCCs on average deal with 100 deliveries per year and Health Posts just under 30 (Kolehmainen-Aitken & Shrestha, 2008). If the number of deliveries in each facility type doubles, the surplus increases to between NRs 58 and 72.

In district hospitals the average cost for a normal delivery is estimated at NRs 1,579. It should be noted that this cost may not include all the supply costs incurred by the woman for delivery. The Borghi et al study found that while official hospital charges amounted to NRs 678, other costs (including the value of food, items brought for the newborn baby, washing materials and gifts for the staff) amount to a further NRs 1,300. Not all these items would be covered by the free delivery funding (which is probably appropriate).

[3] The main workload of PHCCs and Health Posts are recorded outpatients. The resource required to treat one regular outpatient is clearly not equivalent to that required for one delivery. It is estimated that a delivery requires around 2 hours of input (often spread out over a longer period). In contrast an outpatient visit such as trauma or first antenatal visit is expected to require around half an hour of input. Based on this we make the assumption that the resources required for a delivery are four times those required for other outpatients.

Table 2: Unit cost and resources under free delivery care (Ama programme (NRs)

	Normal Delivery			Complications	
	District Hospital	PHCC	Health Post	DH C-Section	DH Complication
Costs					
General facility cost	999	515	521	5,993	4,495
Supplies (e.g. medicine, gloves, SD kit)	280	280	280	2,000	1,000
Minor quality improvements (facility & staff)	300	300	300	600	600
Total (Recurrent)	1,579	1,095	1,101	8,593	6,095
Capital equipment (per delivery)	1,009	557	565	3,457	3,457
Total including equipment	2,588 (BEOC)	1,652 irthing Centre)	1,666 Birthing Centre)	12,050 (CEOC)	9,552 (CEOC)
Funding	-				
Government Budget	679	437	443	4,075	3,056
Free delivery Funding	1,000	700	700	7,000	3,000
Total funding	1,679	1,137	1,143	11,075	6,056
Balance					
Gap (recurrent)	100	43	42	2482	-38
Gap (total including capital)	-909	-514	-523	-975	-3495
Gap (recurrent, Deliveries × 2)	307	72	58	3,724	893

The funding flow available for a district hospital only appears to be sufficient to cover the costs of a normal delivery if NRs 1,000 per delivery is provided (i.e. higher than the lower rate of NRs 700). Part of the reason for this is that hospitals often operate at low levels of occupancy. Across the country the occupancy in all public hospitals is about 50% while for hospitals of between 15 and 25 beds it is around 40%. A higher level of occupancy would reduce this cost. Deliveries account for around a third of inpatients, although a smaller proportion of bed-days since most deliveries will require less than the average stay in hospital for all patients (around 2.2 days). If the number of deliveries doubles, then a surplus is possible even with a payment of NRs 700. Yet doubling deliveries represents a substantial change in activity and hospitals will be running essentially at a loss until these greater volumes are achieved. A payment of NRs 1,000 per delivery would help hospitals to offset their costs at a lower level of activity and offer a greater stimulus to improving care.

The new SDIP guideline proposes payments of NRs 7,000 for a caesarean section and NRs 3,000 for a complication. The cost analysis suggests that the costs of complications are largely covered by the proposed payment and budget funding. Some complications, such as eclampsia, will cost substantially more than this to treat and others, such as severe anaemia,

will cost less. It will be important to monitor the composition of complications to verify that hospitals are not refusing to treat the more expensive complications[4].

The current figures suggest that district level facilities will make a recurrent surplus from undertaking caesarean sections. It is possible that this could act as incentive to undertake too many caesareans. Such a tendency is common in countries where facilities are paid according to the number of cases treated. The most egregious examples are in countries such as Brazil where rates often exceed 50 or 60 percent - a large part of which is put down to providers inducing demand in order to increase revenue (Brugha & Pritze-Aliassime, 2003). It should be noted, however, that an acceleration in rates of caesarean sections usually occurs in systems where the levels of payment far exceed the relatively modest payments suggested by the SDIP scheme. The rates proposed are likely to be substantially less than the price of caesarean sections in larger for-profit private sector facilities. It is reported that these can often exceed NRs 20,000 or 30,000. Furthermore, some incentive to increase caesarean sections is welcome, given the very low overall rate across the country - reported at 2.7% (HMGN, 2007). Yet the danger remains that any growth in sections induced by the payment regime might be amongst women where surgical intervention is not medically indicated. It will be important to watch the trend in section rates and to monitor these trends across types of facility.

The above analysis suggests that the payments proposed, together with the budget from government, should be sufficient to offset the cost to facilities of the free delivery policy and provide a modest surplus that can be used for general quality improvements. These payments are not, however, sufficient to offset the capital costs of delivery. Per delivery, annualised equipment costs are shown in the table, based on current workloads. Clearly as equipment is used more intensively these costs will fall. Without additional funding it will not be possible for a facility to obtain or replace capital equipment that is vital to provide good quality safe delivery, BEOC or CEOC care. Yet for the free delivery policy to operate effectively services must be upgraded to a level that enables facilities to provide safe delivery and care for complications. This demonstrates the importance of combining the free delivery payments with supply-side investment. In financial terms, the cost of maternity-related capital equipment (not buildings) represents around one half of the recurrent cost of care. Whilst this proportion will fall as facilities are used more intensively, it implies that investment in equipment on an annual basis should equal between 40% and 50% of the total spending on free delivery, excluding the cost of buildings.

The cost analysis provides an indication of costs relative to funding flows for free delivery. It broadly suggests that facilities will receive sufficient resources to maintain a quality delivery service without requiring additional user charges. A number of qualifications are important. Timely payment, as discussed above, will be critical to the functioning of the scheme.
A second concern is that the management of a facility may not utilise the resources provided by free delivery to improve maternity care, but instead use the funding for general hospital

[4] Sometimes referred to as 'cream skimming', when a provider accepts mainly the lower cost, more profitable patients (the 'cream') and attempts to reject, perhaps through re-referral, the more expensive.

services. Although the payment should provide some incentive to improve maternity services in order to attract more deliveries, this is not guaranteed.

Overall cost of the policy and sustainability

Projections suggest that the approximate cost of the overall free delivery will be NRs 900 million in 2009/10, rising to NRs 1,571 million in 2017/18 (Table 3 & Table 4)[5]. This cost includes three the sub-components that constitute the Ama programme:

1. The transport payments to women
2. Free care payments to the facilities
3. Monitoring and evaluation costs

The direct costs of the Ama components alone rise from NRs 441 to NRs 748 million across the period. In addition, the general costs of free delivery (facility staffing, operating costs etc) and capital costs are estimated. The indirect cost of free delivery is estimated to rise from NRs 215 to 384 Million (Table 3). This figure does not take account of improvements in facility efficiency and the actual costs could, therefore, be lower. On the other hand, above-inflation salary rises or costs of other items could inflate this cost. Capital costs are around 28% of the total cost of services. Capital equipment costs here are annualised and spread over the period. In reality, capital spending is lumpy and improving services will require substantial spending early in the programme. The figure provided here is indicative but demonstrates the financial implications of prioritising important investment in supply, which we consider is a pre-requisite tor stimulating the improvement in services.

[5] The overall Ama costing was developed by Dr Suresh Tiwari. These data are supplemented by estimates for monitoring and evaluation, general facility (budget financed) costs and capital costs.

Table 3: Cost of the Ama component of the free delivery policy, NRs million[6]

Year	Population	CBR	Live Birth	% of institutional delivery	Total ID	ND at B/CEOC below (1)	ND at B/CEOC (2)	Complication-15% (3)	C/S- 5% (4)	cost of ND below B/CEOC 1x @ 700	cost of ND at B/CEOC 2x @ 1000	cost of ND complication 3x @ 3000	cost of C/S 4x @ 7000	Total Transportation cost @775	Monitoring & evaluation	Total Amma Cost
2009-10	27,473,476	26.2	720,721	22.0	158,559	52,324	106,234	23,784	7,928	36.63	106.23	71.35	55.50	129.03	42.00	**440.74**
2010-011	28,023,715	25.5	715,963	24.5	175,411	57,886	117,525	26,312	8,771	40.52	117.53	78.93	61.39	142.74	34.00	**475.11**
2011-012	28,584,975	24.9	711,237	27.0	192,034	63,371	128,663	28,805	9,602	44.36	128.66	86.42	67.21	156.27	34.00	**516.92**
2012-013	29,113,536	24.2	705,478	29.5	208,116	68,678	139,438	31,217	10,406	48.07	139.44	93.65	72.84	169.35	34.00	**557.36**
2013-014	29,651,871	23.6	699,765	32.0	223,925	73,895	150,030	33,589	11,196	51.73	150.03	100.77	78.37	182.22	34.00	**597.11**
2014-015	30,200,160	23.0	694,098	34.5	239,464	79,023	160,441	35,920	11,973	55.32	160.44	107.76	83.81	194.86	34.00	**636.19**
2015-016	30,758,588	22.4	688,477	37.0	254,737	84,063	170,674	38,210	12,737	58.84	170.67	114.63	89.16	207.29	34.00	**674.60**
2016-017	31,327,341	21.8	682,902	39.5	269,746	89,016	180,730	40,462	13,487	62.31	180.73	121.39	94.41	219.51	34.00	**712.34**
2017-018	31,876,694	21.2	675,786	42.0	283,830	93,664	190,166	42,575	14,192	65.56	190.17	127.72	99.34	230.97	34.00	**747.76**
Total cost needed for 2009/010 to 2017/018										**463.34**	**1,344**	**903**	**702**	**1,632**	**314**	**5,358**

Note: Population for 2006, 2011, 2016 and 2021 source is Population Projection for Nepal 2001-2021, and for other years is based on the exponential growth rate.
CBR decline is based on the CBR trend of 2001 and 2006 NDHS.

[6] All figures at constant prices. Based on projections developed Dr Suresh Tiwari, SDIP Coordination for SSMP. Based on assumption that 33% of deliveries are undertaken at below district hospital level (reflects current HMIS figures), 5% caesarean section rate and 15% complication rate. M&E costing is described in the monitoring section of this report.

Table 4: Overall cost of free delivery, % of government budget and estimated financing of the Ama component by GoN, NRs million

Year	Amma financing required	Indirect cost	Capital cost	Total cost	Total as % of GoN health budget	Amma as % GoN health budget	GoN contribution [1]	GoN % of total	Gap (constant prices)	Gap (5% inflation)
2009-10	440.74	215	247	902	11.8%	5.8%	110	25.0%	(331)	(331)
2010-011	475.11	238	273	985	12.6%	6.1%	156	32.9%	(319)	(352)
2011-012	516.92	260	299	1,076	13.5%	6.5%	203	39.2%	(314)	(364)
2012-013	557.36	282	324	1,163	14.3%	6.9%	251	45.0%	(307)	(373)
2013-014	597.11	303	348	1,248	15.1%	7.2%	299	50.1%	(298)	(380)
2014-015	636.19	324	372	1,333	15.8%	7.5%	349	54.9%	(287)	(385)
2015-016	674.60	345	396	1,416	16.4%	7.8%	400	59.2%	(275)	(387)
2016-017	712.34	365	419	1,497	17.0%	8.1%	451	63.4%	(261)	(386)
2017-018	747.76	384	441	1,573	17.6%	8.3%	504	67.4%	(244)	(378)
Total	**5,358.14**	**2,716**	**3,119**	**11,193**	**15.0%**	**7.2%**	**2,723**	**50.8%**	**(2,635)**	**(3,334)**

Note: [1] Based on devoting 30% of any increase in real spending on health by GoN to the Ama programme

The overall public sector health budget for 2008/09 is NRs 14,945 million, of which NRs 4,086 is the general administration (regular) budget and NRs 10,859 Million is the development budget. The GoN portion of the overall budget amounts to NRs 7,499 million. The cost of free delivery (2009/10) represents around 12 percent of the GoN health budget, of which the Ama component is just under 5.8%. Over the last two years the budget for health has risen by more than 10% in real terms[7]. If we assume a modest 2% annual real increase in the budget, the overall cost of free delivery is anticipated to increase to 17.6% by 2017/18 and the Ama component to rise to 8.3% of total government expenditure on health.

In 2007/2008, the proportion of SDIP financed by the Government of Nepal was 40% but this fell to just over 20% in 2008/2009. Given that free delivery represents a high priority programme for government, it is to be expected that the cost would be progressively absorbed within the national budget. Whether this is done largely depends on how far Ama is prioritised to receive any growth in allocations for the health sector. If we assume, for example, that real spending by GON on health rises by 2% a year and that 30% of the growth in budget is allocated to Ama then the programme could be two-thirds financed by the Government by 2007/18.

The gap left to be financed from non-GoN sources falls from NRs 331 in 2009/2010 to NRs 244 million in 2017/2018 at constant prices. For budgeting some allowance for inflation must be included. Inflation since 2000 has averaged around 5%, although at the moment the figure is closer to 9%. Assuming 5% inflation, the projected gap, based on the above scenario, rises from NRs 331 to NRs 378 million. Whether this represents a rise or a fall in foreign currency terms depends on long-run trends in the appropriate exchange rate.

While the budget for the SDIP/Ama for 2008-9 is fully funded, there will be little surplus left, on current projections of uptake, from existing EDP commitments. It is therefore urgent that financial planning starts soon for FY 2009-10, with support for the new policy sought from a range of potential sources, including the GoN.

The overall health financing context for Nepal is constrained. It has the lowest per capita expenditure on health in Asia. The most recent NHA estimated that government expenditure was $2.3 per capita in 2003 (Health economics and financing unit 2006) – some 17% of total expenditure on health. There is some potential for expanding government commitment to health from its current rate of less than 6% of overall public spending, but GDP growth has been limited (1.9% in 2004/5) and tax revenue is also limited (tax revenue was 13% of GDP in 2004/5, while government expenditure was 19% for same year).

Assessing costs, impacts and cost-effectiveness

Cost-effectiveness analysis is a technique for examining whether utilising resources for a particular intervention represents good value for money compared to competing uses of the

[7] Budget analysis for 2007/08 and 2008/09 prepared by RTI, personal communication with Rob Timmons 16th November 2008

same resources. If the analysis is to compare no treatment to the programme intervention then the measure of cost and benefit would examine all costs and benefits arising from delivery care. In the case of the SDIP/free delivery, services are clearly still provided in the absence of the policy. A more appropriate approach, therefore, is to compare the additional costs with the additional benefits – an incremental cost-effectiveness analysis.

The incremental costs of the programme include the programme costs of the Ama intervention, plus other costs, recurrent and capital, incurred by facilities in delivering care (described in costing section). In addition it will be important to include the costs of supervising and monitoring the programme, including technical assistance provided through SSMP/Options.

Measurement of financing interventions is quite different from the measurement of a new technology or treatment, which is the usual focus of economic evaluation. In the case of a new technology, measurement needs to assess the number of patients treated by the new technology and the proportion reporting a good outcome. This can then be compared to baseline (counterfactual) which could either be the absence of treatment for a similar group and/or treatment using an existing technology. It is important that each group is strictly separated so that not only is it clear which of the treatments (none, old or new technology) is received by each, but also that they are not receiving other treatment concurrently (or, if they are, that this additional treatment is received by all the groups equally). In clinical studies it is usually relatively straightforward to ensure that these conditions apply.

Evaluation of public health or health system programmes such as the SDIP is more complicated than in clinical studies since it is much harder to ensure that the preconditions for accurate measurement and attribution of impact are in place. In particular there are problems with measurement of outcome, ensuring a comparator group and controlling for confounding factors.

At the level of measurement of outcome, a key issue is that one of the main variables of interest, maternal mortality, is an extremely rare event and measurement tends to be sporadic and attached to a large confidence interval. This means that trends are extremely difficult to isolate let alone attribute to the programme. Maternal morbidity as reflected in levels of delivery complications are easier to measure but their meaning is less easy to determine. Higher levels of reported complications can, particularly in the initial stages of a programme, reflect more complications that are identified and treated - a positive benefit of the programme (potential maternal deaths that were avoided or near misses), rather than more complications overall. Levels of complications in the population as a whole could certainly be seen as indicative of programme success but place an emphasis on retrospective, self-assessment that can be difficult to interpret. As a consequence it is likely that impact evaluation will need to rely on intermediate measures of benefit such as skilled attendance at delivery (or delivery with a skilled attendant), which can be considered as an output of the programme. Several sources of data over time and by area of the country are available including HMIS, EOC monitoring in selected districts and some surveillance data (Powell-Jackson, Neupane, Tiwari, Morrison, & Costello, 2008).

Attributing impact of the programme is complicated by two factors. Firstly, the programme has been and will be implemented across the country at the same time (or at least through roll out that cannot easily be controlled). As a consequence the main comparison is not between a treated and untreated group measured at one point in time but population groups before, during and after implementation. Over this period it is more or less impossible to prevent the groups under examination being 'contaminated' by other interventions or influences that may influence uptake of delivery care. Outside the health sector, general socio economic development, changes in demography and improvements in physical infrastructure are likely to have a marked impact on uptake. Inside the health sector, other policies general to the sector or maternal health specific, such as improved training in midwifery, changes in the facility quality and financing policies such as the free care, will also influence uptake. As a consequence it is always extremely complex to isolate impact of one element of a programme (current SDIP or revised).

The interrupted time series (and related) approach utilised in the recent evaluation by ICH could continue to be used to investigate the impact of the SM and free delivery policy on skilled attendance (Powell-Jackson, Neupane, Tiwari, Morrison, & Costello, 2008). Essentially this controls for general changes in society that change more or less consistently over time, attributing any immediate or gradual post-policy fluctuations in the variable being considered (institutional or home delivery with skilled attendant) to the policy itself. The ICH work was able to consider the first 15 months after implementation of the original policy, compared to four years before policy implementation. Such an approach could usefully be applied to new changes in policy (SDIP+). This will require adaptation of the original 'model' used to predict the impact, to allow for the impact of both the original and changed policy. It should be noted, that such an approach may still not capture other system changes that are not explained by a smooth time series. In addition if other policies are introduced concurrently with the revised SDIP (for example improvements in supply), then what is in effect measured is the combined policy impact, rather than the specific effect of SDIP.

The weakness of the time series approach is that it requires an accurate retrospectively collected data series and may not control properly for other unmeasured but important determining variables. The ICH evaluation made use of household data that was carefully matched to control for the impact of other variables on access and costs of care. This may provide a more robust measure of impact but it is necessarily more complex and costly to collect, requiring primary survey data.

For the reasons described above, undertaking a cost-effectiveness analysis that accurately distinguishes the impact of free delivery or even the entire safe motherhood programme is clearly not straightforward. This particularly applies to the measure of impact, where it is likely to remain difficult to attribute changes in skilled attendance to programme intervention. However, we recommend that at least one large evaluation of programme impact, which includes collection of household data that is compatible with data collected during the previous evaluation, should be undertaken. This should be done during the first

three years of the free delivery programme. Such an evaluation could be supplemented by time series assessments of impact using the interrupted time series approach.

It is also important that other, less exacting, forms of evaluation are used to help improve the implementation of the programme. Rapid assessments, including public expenditure tracking reviews, have already pointed to early problems in the implementation of the SDIP. These reviews should continue. Costing analysis, even without impact evaluation, can be used to assess whether the costs of the programme are sustainable within the context of the public budget. Some initial costing is provided in this report. Further costing should be undertaken at regular intervals in order to help plan annual budgets of government and development partners.

Conclusions

The SDIP has been innovative and has shown significant improvements in performance over the first 3 years of its life. Particularly impressive is the way that the government and partners have responded quickly and effectively to the problems that have been identified – this responsiveness is not the norm in many settings. At local levels, systems of fund flows and recording have been built which are functioning – not perfectly, of course, but well for a scheme of this complexity.

In our view, the current proposed changes are heading in the right direction (in particular, the shift from individual health worker to facility-based incentives, and addressing continuing high facility costs for users). This should generate more momentum towards facility deliveries, though this shift will probably take place gradually, over time, as household mindsets are changed and as further supply-side investments increase access, particularly in the hill and mountain areas.

Good information systems and financial controls will be the key to effectiveness and public confidence in this policy. The significant design changes will also necessitate a new IEC campaign at district and sub-district level. It should also be accompanied by a focus on greater local accountability and on addressing the quality concerns of households. Some very simple changes could make birthing centres more welcoming for women. It is hoped that the facility payment will create an incentive for staff to be more sensitive to women's concerns.

The costing exercise conducted here suggests that tariffs are broadly in line with facility costs and that a small surplus should be generated per act. This can be reinvested at the facility managers' discretion, but clearly a self-interested focus would be on keeping the customers coming in, by investing in minor quality improvements for customers and maternity staff. The overall cost projections show that the policy will not be cheap, particularly if matching investments in capital expenditure on facilities and equipment are made. However, these investments will benefit the whole package of care – not just maternity care. Using reasonable assumptions, the Government of Nepal should be able to fund an increasing proportion of the cost, over time.

The private not-for-profit and, to some extent, the for-profit sector are already participating to a limited degree in the SDIP, and this should be gradually augmented over time. There are two reasons for this recommendation. The first is to add to the network of supply, particularly in under-served areas. (Although many of the private sector facilities are found in urban areas, most of these are expected to self-select out of the scheme, as the tariffs on offer are lower than their current charges.) Secondly, a process of accreditation of private sector providers is proposed, which should, over time, increase the integration between private and public sectors (for quality standards, reporting etc.) and help to lift standards across the board.

Integration of funding flows with the wider free care initiative and with a more decentralised approach both offer potential in the medium term. At present, there should be a more practical focus on supporting integrated district planning and monitoring, and on piloting stronger mechanisms of local accountability for managing the Ama programme and funds at facility level.

Recommendations

This section summarises the recommendations made in relation to the questions raised in the TORs.

Cash payments to households

- The cash payments to households should continue in the medium term, and should continue to be tiered by ecological zone. These amounts can stay as at present (50% of average actual costs), but over time, if response is much higher in the tarai, compared to the upland areas, the amounts could be rebalanced to increase the support for the hills and mountains (with a possible reduction in the tarai).

Payments to health staff for facility deliveries

- The decision to build staff payments into facility payments is wise. We recommend that a portion of the facility payment equivalent to the previous NRs 300 paid to staff is set aside for quality improvements. These can include benefits for staff, individually or as a team, but should not be automatic. Some should also be used to make the small changes which can make so much difference to users.

Payments to health staff for home deliveries

- The payments to staff for home deliveries have not furthered the original objectives of the SDIP, and we support their removal. This change must be complemented however by renewed investment in increasing access to facilities (roads, health care infrastructure, staff skills etc.).

National free delivery component

- This new approach should reduce the high facility costs which users face and should therefore improve the progress in increasing facility-based deliveries.

- Current tariffs are broadly in line with the costing estimates and with current user fees
- The costing justifies a higher rate (NRs 1,000) for BEOC/CEOC centres.
- All tariffs should be reviewed in one year, however, to allow for fine-tuning of the rates (and to allow for a broader review of early implementation experiences).
- All payments should be dependent on compliance with quality standards, monitoring and auditing.
- The extent of the free care should be clearly elaborated for women and for facilities (exactly which cost components are included, and for which services, pre-, intra- and post-partum, and for neonatal care). There are currently some small areas of ambiguity.
- There should be close monitoring of the CS rates and of different types of complications, to assess whether there is an undue increase in CS, and/or misreporting of categories of delivery. (This means adding the 10 complication categories to the form in annexe 3 of the current guidelines.)
- Both referring and referral institutions should receive payments, as both will incur treatment costs. Referring facilities should receive payments at normal delivery rates and referring facilities the rates appropriate to the complication treated. Close monitoring and auditing will be required to ensure that 'phantom referrals' do not occur.
- Similarly, women who are referred should receive two sets of transport payment as they will incur two sets of travel costs. The second payment should be made on arrival at the referral centre.
- The smooth transfer of funds – already an issue under the SDIP – will become of even greater importance with the free delivery component, and with the inclusion of a wider range of providers (see below). Systems for assuring it will be of prime importance for the functioning of the policy.
- Supervision forms should include checks on whether details of the policy and local recipients are being clearly displayed at facilities (this could be added to annexe 6: the supervision checklist). Other useful additions/alterations to the current reporting forms could include a record of maternity staff (annexe 5: quarterly district report).
- While facilities are free to manage their own funds, it would be useful to have reports of how they have been used. Reporting of use of Ama funds could, for example, follow three simple categories (service costs; staff benefits; quality improvements for users), so that the utilisation of resources can be tracked retrospectively and guidelines adapted in response.
- A new communication strategy will need to be developed as the re-design of the SDIP is quite extensive, and will take time, and some resources, to disseminate. The SDIP should collaborate with the NHEICC on this.
- While the budget for the SDIP/Ama for 2008-9 is fully funded, there will be little surplus left, on current projections of uptake, from existing EDP commitments. It is therefore urgent that financial planning starts soon for FY 2009-10, with support for the new policy sought from a range of potential sources, including the GoN.

- The importance of continuing investment in extending the supply network and improving the availability and quality of care is emphasised here, and the cost implications elaborated.
- The checklist in annexe 2 may be useful for periodic reviews of progress in the development of the Ama programme.

Integration with free basic health care and decentralisation

- The Ama services are already provided in an integrated way, but funding streams are separate. In the short term, this should be preserved, as the wider free care policy is developed and established.
- In the meantime, there should be a focus on supported integrated planning and monitoring of different health programmes by the district team. This is happening in theory at present, but not always in practice. Integrated reporting on monitoring funds should also be a priority.
- At national and facility level, funding for free care will affect the SDIP/Ama and vice versa, so it is important to document their combined impact and the degree of cross-subsidisation from one to another. Maternity care is a core services and has traditionally been an important profit-making activity. The important lessons learned through the SDIP process and internationally on the removal of fees should be absorbed by those responsible for implementing the free care programme.
- In the longer term, and particularly as the GoN assumes a greater proportion of the funding burden for the Ama programme, the funding flows can be integrated at national level. The series of steps for this integration are set out in the report.
- In preparation for whatever form federalism and decentralisation come to take in Nepal, we recommend that the Ama programme supports the piloting of local 'women's health' funds, to be co-managed by HFMC and women's organisations. They could receive a small component (such as NRs 100) from the payment per delivery (thus creating an incentive to boost demand for institutional deliveries). The funds could be used to increase awareness of the new Ama programme, and to tackle locally identified blocks to service uptake (e.g. means of providing warm food at the birthing centre; making centres more comfortable for companion to stay in; assistance where onward referral costs are beyond the family's means etc.). These funds should ideally be matched by VDC contributions, to increase local ownership of the Ama cause. Routine monitoring of VDC contributions would enable programme managers to assess progress. Ultimately, those jointly managed funds could be expanded if wider decentralisation and integration of funding streams occurs.
- Paradoxically, decentralisation usually creates a need to strengthen vertical 'technical' controls at the same time as horizontal links are being pursued. Enforcing financial and activity reporting to the national level, from districts, will be an important part of that process.

Inclusion of the private sector

- There is now one year's worth of experience of including the PNFP sector and private medical colleges in the SDIP. The patterns of uptake should be analysed for early lessons on the potential contribution of non-state partners.

- The inclusion of the private sector, if carefully, managed, offers opportunities for extending access, improving integration, and raising quality in the longer term.
- We recommend that initially a uniform tariff for public and non-public providers is offered, but with a commitment to review this approach within 2 years and possibly develop a more sophisticated mechanism.
- Facilities should meet HMIS, EOC and Ama reporting guidelines, if they are to receive payments under the scheme. At present, some report, but most do not.
- It should also be clear that no payments can be accepted by participating facilities for delivery care, unless it is part of a separate 'luxury' package, where full costs are paid by clients for care in cabins (private rooms).
- The inclusion should rest on a two-stage accreditation process, in which basic quality standards (as specified in the current guidelines) are the first requirement for entry, but with an agreement that over 1-2 years, there will be a move to more sophisticated service standards.
- TA will be needed over the intervening period to develop this accreditation process, which should form the basis for agreements with public sector providers too.
- In future, there may be opportunity to develop contracts with the private sector to develop new services in under-served areas, with government support for set-up costs. The implications of this go beyond the SDIP/Ama – these are sector-wide and multi-sectoral issues.
- Some of the monitoring and audit roles – particularly for periodic independent checking of functioning - can also be contracted to private organisations and NGOs.
- The same paradox that applied to decentralisation (which needs a stronger centre) applies to developing a stronger public-private partnership: public sector capacity to develop and manage contracts with the private sector must be strengthened for the partnership to work effectively (and this has implications well beyond the safe motherhood sub-sector).

Monitoring, evaluation and further research

- Monitoring will be a key to the success of the Ama programme. It is therefore highly recommended that capacity is developed, at district, regional and national level, to monitor and audit the Ama programme. There are currently a few key individuals who carry out such work very effectively, but this capacity must be broadened and institutionalised, if the programme is to be sustained.
- Monitoring costs should not be under-estimated. Something in the region of 10% of the Ama costs should be added for M&E.
- A range of monitoring and tracking tools should be used, including routine monitoring, spot checks within routine supervision, periodic rapid reviews at community level, annual auditing and more formal evaluation.
- The current forms are well developed. Some minor changes have been suggested, such as tracking the different types of complications; and monitoring (with simple categories) the use of the Ama funds by facilities.
- Evaluation of the cost-effectiveness of the Ama programme will be difficult, primarily because of the difficulty of attributing change in a dynamic situation, with multiple interventions, and no control areas. We therefore recommend a focus on tracking

costs and tracking a range of intermediate output indicators, to give a more pragmatic assessment of value for money.

- We suggest that process based rapid reviews are undertaken on a six monthly basis. Available time series HMIS and other data should be collected on a regular basis to permit an interim evaluation after the first 18 months of implementation. We also suggest that a larger scale evaluation that looks at the effect on utilisation and household finances is undertaken after the first 2-3 years of implementation. To ensure adequate baseline data, early preparations for this evaluation should be taken, including quality of care data (which may be available from on-going SSMP studies).
- Case studies on health facility financing (particularly at hospital level) would assist in understanding the likely impact on the hospital economy and would help with planning a more integrated approach to free care generally. At present, for example, there is no systematic reporting of revenues from user fees or local government sources, so predicting the impact of free care policies is difficult. (For example, it is hard to tell whether the free drugs list is having perverse incentives, such as increased prescription of off-list drugs.) This would also provide useful information for future decentralisation discussions, providing information on patterns of revenue and expenditure by facility type and by region.
- Similarly, very little is known on how health worker support themselves in Nepal, and a survey on health workers incentives, and how these link to working practices, would provide useful policy information for planning future initiatives. (For example, it would be good to know whether free care has any impact on dual practice by public health workers.)
- The SDIP has benefited from close collaboration with technical support partners and this collaboration will continue to be important as the programme evolves into this new phase with new challenges.

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Annexes

Annexe 1 Key informants

Kathmandu

1. Dr. Dirgh Sing Bam	Acting Health secretary- Health, MoHP
2. Dr Sudha Sharma	Acting Health Secretary- Population, MoHP
3. Dr. Babu Ram Marasini	HSRU, MoHP,
4. Mr. Yogendra Gauchan	Chief, Account Section, MoHP
5. Mr. Giriraj Subedi	HEFU, MoHP
6. Mr. Gyanendra Shrestha	National Planning Commission
7. Mr. Shayam Raj Khanal	DoHS- Finance section
8. Dr. Bala Krishna Suvedi	FHD, Director
9. Wilda Campbell	SSMP/Options
10. Louise Hulton	Options/London
11. Greg Whiteside	SSMP/Options
12. Mr. Hom Nath Subedi	SSMP/Options
13. Mr. Ajit Singh Pradhan	SSMP/Options
14. Dr Ganga Shakya	SSMP/Options
15. Mr Rajan Adhikari	SSMP/Options
16. Dr Rob Timmons	RTI
17. Devi Prasai	RTI
18. Sushil Chandra Baral	DfID- health adviser
19. Susan Clapham	DfID - health adviser
20. Tim Powell Jackson	ICH/London
21. Sudeep Pokharel	GTZ
22. Anand Tamang	CREHPA
23. Dr. Badri Raj Pandey	Chairperson Nepal health economics association
24. Dr Shyam Bhattarai	Managing director, Nepal Medical College

Field visits

Mithinkot PHCC- Kavre
Bhumlutar HP- Kavre
Jaisithok SHP- Kavre
Duhlikel PNFP hospital- Kavre
DHO- Kavre
Nepal Family Planning Association Clinic- Panchkhal clinic- Kavre
Bhaktapur district hospital- Bhaktapur

Annexe 2 Lessons on implementation of policies to reduce financial barriers to obstetric care: checklist for the development of Nepal's free delivery policy

Lessons based on international experience	**Commentary on situation in Nepal**	**Score** √ =met X = not met ? = partially or uncertain
1. Design of policy		
The policy should be based on a thorough situation analysis of the main barriers to raising skilled delivery (financial barriers may not be the most significant factor in some contexts).	The costing study of 2004 indicated the significance of financial barriers – the policy was developed in response to these findings	√
Policies directly addressing financial barriers are most appropriate where there is: ▪ High maternal mortality	Nepal does have high MMR rates, though these reduced significantly in the decade up to 2006 (prior to significant influence of the SDIP)	√
▪ Relatively low skilled attendance rate at delivery	Yes, very low rates, both for skilled attendance and facility deliveries	√
▪ High inequalities in access to skilled attendance at delivery	Large inequalities, by ecological zone, rural/urban and by socio-economic group (DHS data)	√
▪ Low caesarean rates (below 5% of all deliveries) and inequalities in uptake of CS services	Yes, low rates (3% nationally), with evidence of over-use in urban areas and very low availability in rural ones	√
▪ Physical access by population to health care facilities	Access is acceptable in the tarai (where almost half of the population lives), but very long travel times recorded in some parts of the hills (apart from the Kathmandu valley) and the mountains	**?**
▪ Staffing of health facilities with at least minimum norms of trained personnel	There are shortages of staff with SBA training, though this is being improved, with support from SSMP and other partners	**?**
▪ Acceptable quality of care, with functioning equipment and adequate drug supply	There are a number of concerns about inputs to care and quality of services provided. These are being improved gradually	**?**
▪ High out-of-pocket payments by households for delivery care, relative to household income	This was demonstrated by the 2004 costing study. Since then, there has been a reduction with the SDIP. However, the SDIP evaluation suggests	√

	that financial barriers remain significant	
The package of services to be covered should address the policy's objectives (e.g. including the interventions which save lives and cause most economic hardship to families)	The current proposal includes all delivery types (complications, CS etc.). Post-partum care is also included, but guidelines should perhaps be made more explicit about this. ANC is already free. Assistance with transport costs is also included.	√
The policy should be consistent with the wider policy environment and thinking in government	The focus of the current government is on making health care more affordable generally (free general health care is now being rolled out for district level and below). The Ama programme is therefore in line with general policy developments	√
The policy should extend to major service providers, whatever their sector of work, reflecting current utilisation patterns	The SDIP was originally only available for public sector providers, but has now been widened to include the PNFP sector. In the Ama programme, this will be widened further to include PFP facilities which meet agreed conditions.	√
Eligibility should reflect areas of greatest need but also a realistic assessment of available resources	The progamme is national in scale. It is currently supported by DfID. Financial commitments beyond 2009 are still being negotiated	**?**
Additional investments should be planned alongside the policy to address key supply-side constraints (such as staff shortages) and to cope with increased utilisation in the medium-term	The SSMP and others are investing in supply-side improvements, but the challenges are large, in terms of access and quality. On the other hand, utilisation at facility level has so far only increased modestly and many facilities are still under-utilised	**?**
The scope for additional demand-side investments, such as in transport funds, should be considered alongside supply-side approaches, in specific areas of need	A cash transfer to women has been in place and will continue. This covers approximately half of the average access costs of households. The transfers are universally available but vary by ecological zone	√
The role of complementary players, such as TBAs, should be considered – can they be involved in the policy in a constructive way?	There is no formal provision for this at present, but there is scope for local initiatives. Some facilities do currently pay a small amount to community health volunteers who bring women in for deliveries	**?**
Policies should reinforce the referral	There is no system at present for	**?**

process, so that uncomplicated deliveries are handled at lower level facilities	discouraging women from presenting themselves for normal deliveries at higher level facilities – up till now, the cost of delivery itself was a deterrent. Transport payments are fixed, so that too should deter women from travelling an unnecessary distance. Physical access is also challenging in many areas. This is therefore unlikely to be a major issue.	
Conversely, the policy should support access to referral care for those with medical needs	The treatment of referral cases should be clarified in future – whether referring and referral facilities both receive payments for the same delivery; whether and how women receive transport cost support for the onward journey; how these costs are recorded and monitored etc.	**?**
2. Policy development process		
All key stakeholders should be consulted and involved in development of the policy. This process should engage with potential 'champions', who can sustain the policy momentum nationally and sell the policy politically	There has been widespread consultation throughout the development and implementation of the SDIP. Local 'champions' have emerged from within the Ministry and also within the donor community (Ensor, Clapham, & Prasai 2008)	√
The policy should be carefully and realistically costed (based on utilisation patterns, caseload, unit costs, and projected changes to these) and matched with likely funding sources (also projected to assess likely changes over the medium-term)	Costing work has been undertaken at various stages and is ongoing for the new developments. The matching with funding sources is a current priority	**?**
Policy guidelines should be clearly elaborated and communicated to all key stakeholders	The evaluation found some initial confusion about the SDIP (which was quite a complex policy to grasp). This has improved over time, as evidenced by improved SDIP funding flows etc. However, the re-design will create a need for a new communication campaign	**?**
Policy should be subject to periodic review and revision with major stakeholders	There is ample evidence that the SDIP has been amended in the light of emerging concerns. The shift to a free	√

	delivery approach is based on evidence from the evaluation and rapid reviews	
3. Policy dissemination		
Core messages should be kept as simple as possible	The SDIP, with its three components and layered payments, presented a communications challenge. The switch to facility payments and universal free delivery care should, in principle, be easier to grasp	**?**
Strategy should be developed for active dissemination of policy to communities and health workers	The SDIP evaluation suggests that this was not initially well developed. The new Ama programme should learn from that experience	**?**
Statement of benefits package and eligibility criteria should be prominently displayed	This was meant to happen in theory, but in practice has not been fully observed. This should be integrated into the future supervision checklist	**?**
4. Resource allocation		
Funds should be allocated by area according to a population-based formula, adjusted for service utilisation rates and case-mix	In Nepal, funds were sent to districts according to past utilisation, projected forwards	√
Other public funding sources should be maintained so that the policy provides additional resources	This has not been studied. However, there is no reason why the SDIP should have negatively affected other sources, as it was being externally funded and passed through separate funding mechanisms	√
Funding should be regular and predictable	Lengthy delays were documented in the early stage of SDIP implementation, but this has improved dramatically. The introduction of free delivery care will increase the importance of this issue, as the implications for service delivery of irregular funds will be much more severe	**?**
5. Payment systems		
The payment mechanism should ensure that average production costs (or the components that are not centrally funded or subsidised) are reimbursed (but not over-reimbursed) for each provider type	Information on facility costs is limited. However, our preliminary estimates suggest that the current tariff is broadly in line with average actual costs, taking into account core costs and existing subsidies. Price information also suggests that most providers will not lose out financially. The tariff should be	√

	reviewed periodically, however, especially in relation to the private sector, for which detailed information is lacking.	
Payments to facilities should either be made in advance, based on predicted caseload, and adjusted periodically, based on reports, or paid retrospectively but frequently, to avoid cash-flow problems	The current suggestion is that the public sector is paid in advance (with accounting for funds retrospectively), while the private sector is funded retrospectively for services delivered. This can work if the flow of funds is fast and efficient	√
If based on activities, there should be record-keeping which allows for independent verification of cases managed	Detailed monitoring forms have been developed, and there is a provision for regular spot checks of women who are reported to have received free deliveries. The good use of these monitoring tools will be of paramount importance.	√
Indicators of cost escalation, including caesarean rates, should be monitored, and incentives adjusted to counter-act over-medicalisation	To date, there is no evidence of an increase in CS rates. However, the previous policy incentives were either neutral or negative (same rate paid for all deliveries, whether complicated or not, in the low-HDI districts). In future, there may be some benefits to facilities from increasing CS numbers. This should therefore be monitored, and tariffs adjusted accordingly	**?**
The financial impact on health facilities should be monitored, with checks to ensure that costs are not being shifted onto other services, or into informal payments	This has not been considered to date and was less applicable under the SDIP. In future, some case studies of hospital financing (taking the hospital as a whole), and how it changes over time with the introduction of the free care policies, would give useful insights	**?**
If health workers were dependent for part or whole of their income on user fees, then compensatory measures should be built into the policy	Staff have not been paid from user fees. However, there are high levels of dual practice amongst public health workers. The free care may threaten that. Auditing should aim to assess whether staff are following implementing the policy effectively	**?**
6. Management, monitoring and evaluation		
There should be clear lines of responsibility (both institutional and	Responsibility is clearly defined in the current draft guidelines. Support will be	√

individual) for managing and monitoring the policy implementation process	needed to ensure that they are applied consistently in practice	
Timely monitoring should both pick up and respond to problems but also flag up successes to generate continued financial support	Past problems have been effectively identified and responded to. This reflects a strong partnership, which will continue into the future, it is hoped	√
Periodic community-based surveys should assess actual benefits to different socio-economic and geographical groups	The rapid reviews carried out by CREHPA have been very effective in providing a 'reality check' – these should be institutionalised	√
Evaluations should be conducted periodically, using baseline indicators of utilisation, quality of care, health outcomes and household costs	There were no baseline data at the start of the SDIP, but the evaluation data can provide some of the baseline data for the Ama programme. Some aspects, such as quality of care indicators, require additional measurement, however.	?
Country experiences should be documented and shared, focussing not only on costs and outcomes, but also on the processes which enabled policies to be sustained and to be effective, or conversely, which acted as barriers	There have already been some publications based on the SDIP experience - for example, (Ensor, Clapham, & Prasai 2008) – and others will be forthcoming from the evaluation results.	√

Source: checklist taken from (Witter, Richard, & De Brouwere 2008)

Annexe 3 Assumptions used in costing

A series of assumptions were used to develop the unit cost scenarios.

In District Hospitals

General recurrent costs of facility are based on the Nepal Public Health Facility Efficiency Survey (NPHFES)(Nepal Health Economics Association, 2004). This survey was published in 2004 and the data are already five years old. It does, however, represent the only comprehensive survey of health facility costs for all levels of the public system. These are increased to take allowance for increasing prices as follows:

- Staff: assumption is that costs have risen by 50% or 9% a year compounded over 5 years
- Other costs: risen by 30% or 5% a year compounded over 5 years (inflation has been between 2.5 and 9%, but averaged around 5%)

Total costs are apportioned into inpatient and outpatient costs using the ratio in the FES (around 70% for inpatient care).

General recurrent costs (minus drugs and medical supplies which are included separately) are divided by the average total number of bed-days for a 25 bedded hospital recorded in the HMIS for 2006/07 (DOHS, 2008). This provides the basic unit cost per bed-day which incorporates the costs of staffing, utilities, building maintenance, transport and other general recurrent costs of the facility.

In order to obtain delivery-specific costs, general costs are multiplied by the assumed length of stay for each condition as follows:

- Normal delivery – 1 day
- C-section - 6 days
- Complication - 4.5 days

In PHCC and Health Posts

General recurrent costs are derived from the NPHFES and increased in line with prices (with allowance for price increases as for district hospitals).

General recurrent costs are allocated according to the number of patients (based on HMIS average for PHCCs and Health Posts for 2006/07)

It is assumed that a delivery case requires the resources devoted to 5 outpatients.

Equipment costs (all facilities)

The NPHFES calculates the cost of equipment currently utilised by facilities. It does not guarantee that the equipment costed is all that is required in order to provide good quality services. Given the importance of adequate equipment for well- functioning delivery services, we base the equipment cost on standardised equipment packages developed by SSMP for district hospitals, PHCCs and Health Posts.

The costs of these equipment packages are annualised by dividing by the expected life of the equipment. An average rate of 8 years is used (some items will last much longer, some much shorter).

The cost of equipment is allocated to delivery care as follows:

- the portion related to labour/delivery care allocated 100% to delivery care
- the portion related to blood-banking allocated 50% to delivery care (other surgical services in DH will require this function)
- the portion related to general equipment is allocated according to number of bed-days

Delivery-related equipment costs (non blood banking) are then allocated according to the total number of deliveries per year.

Delivery-related equipment costs for blood banking are allocated according the number of complicated deliveries per facility. We assume the proportion of complicated deliveries is 20% in district hospitals. This higher than the current level for district hospitals but roughly equivalent to the level recorded across all public hospitals. Given that the intention is to upgrade district hospitals to CEOC centres, it is expected that the proportion of complications recorded by district hospitals will rise.

Supply costs

Supply costs relate to spending on medicines and medical consumables used in provision of delivery care. Costs are based on normative calculations (what should be provided according to expert assessment rather than what is actually provided) undertaken as part of a previous delivery care costing study (Borghi, Ensor, Neupane, & Tiwari, 2004) as follows:

- Normal Delivery – 280 RS
- Caesarean Section – 2,000 RS
- Complications – 1,100 RS (a weighted average of the consumable costs of eclampsia, severe anaemia, sepsis, and haemorrhage)